

**OCF “Ipanema” – New Resource Type for Colour Rendering Index – Data Model WG CR  
3405**

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## Colour Rendering Index

### 1.1.1 Introduction

This Resource describes a Colour Rendering Index (CRI).

The Property "cri" is an number.

A colour rendering index (CRI) is a quantitative measure of the ability of a light source to reveal the colours of various objects faithfully in comparison with an ideal or natural light source.

Light sources with a high CRI are desirable in colour-critical applications such as neonatal care and art restoration.

It is defined by the International Commission on Illumination (CIE) as follows:[1]

Colour rendering: Effect of an illuminant on the colour appearance of objects by conscious or subconscious comparison with their colour appearance under a reference illuminant. The value often quoted as 'CRI' on commercially available lighting products is properly called the CIE Ra value, 'CRI' being a general term and CIE Ra being the international standard colour rendering index

### 1.1.2 Example URI

/ColourRenderingIndexResURI

### 1.1.3 Resource type

The Resource Type is defined as: "oic.r.colour.renderingindex".

### 1.1.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Colour Rendering Index",
    "version": "2020-10-16",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LICENCE.md",
      "x-copyright": "copyright 2020 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ColourRenderingIndexResURI" : {
      "get": {
        "description": "This Resource describes a Colour Rendering Index (CRI).\n\nThe Property\n\"cri\" is an number.\n\nA colour rendering index (CRI) is a quantitative measure of the ability of a\nlight source to reveal the colours of various objects faithfully in comparison with an ideal or\nnatural light source.\n\nLight sources with a high CRI are desirable in colour-critical applications\nsuch as neonatal care and art restoration.\n\nIt is defined by the International Commission on\nIllumination (CIE) as follows:[1] \n\nColour rendering: Effect of an illuminant on the colour\nappearance of objects by conscious or subconscious comparison with their colour appearance under a\nreference illuminant. The value often quoted as 'CRI' on commercially available lighting products\nis properly called the CIE Ra value, 'CRI' being a general term and CIE Ra being the international\nstandard colour rendering index",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.colour.renderingindex"],
              "if": ["oic.if.s", "oic.if.baseline"],
              "cri": 80.1
            }
          }
        }
      }
    }
  }
}
```

```

    "schema": { "$ref": "#/definitions/RenderingIndex" }
  }
}
},
"parameters": {
  "interface": {
    "in": "query",
    "name": "if",
    "type": "string",
    "enum": ["oic.if.s", "oic.if.baseline"]
  }
},
"definitions": {
  "RenderingIndex": {
    "properties": {
      "rt": {
        "description": "The Resource Type.",
        "items": {
          "enum": ["oic.r.colour.renderingindex"],
          "maxLength": 64,
          "type": "string"
        },
        "minItems": 1,
        "uniqueItems": true,
        "readOnly": true,
        "type": "array"
      },
      "cri": {
        "description": "The colour rendering index.",
        "maximum": 100,
        "type": "number",
        "readOnly": true
      },
      "n": {
        "$ref":
"https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
schema.json#/definitions/n"
      },
      "id": {
        "$ref":
"https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
schema.json#/definitions/id"
      },
      "if": {
        "description": "The OCF Interface set supported by this Resource.",
        "items": {
          "enum": [
            "oic.if.s",
            "oic.if.baseline"
          ],
          "type": "string"
        },
        "minItems": 2,
        "uniqueItems": true,
        "readOnly": true,
        "type": "array"
      }
    },
    "type": "object",
    "required": ["cri"]
  }
}
}
}

```

### 1.1.5 Property definition

<Table Reference Here> defines the Properties that are part of the "oic.r.colour.renderingindex" Resource Type.

**Table 1 – The Property definitions of the Resource with type "rt" = "oic.r.colour.renderingindex".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
cri	number	Yes	Read Only	The colour rendering index.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 1.1.6 CRUDN behaviour

<Table Reference Here> defines the CRUDN operations that are supported on the "oic.r.colour.renderingindex" Resource Type.

**Table 2 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.renderingindex".**

Create	Read	Update	Delete	Notify
	get			observe