

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931479

Luminaire Tested: DFN2DS-TR4F0-060DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931479
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR4F0-060DS830-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

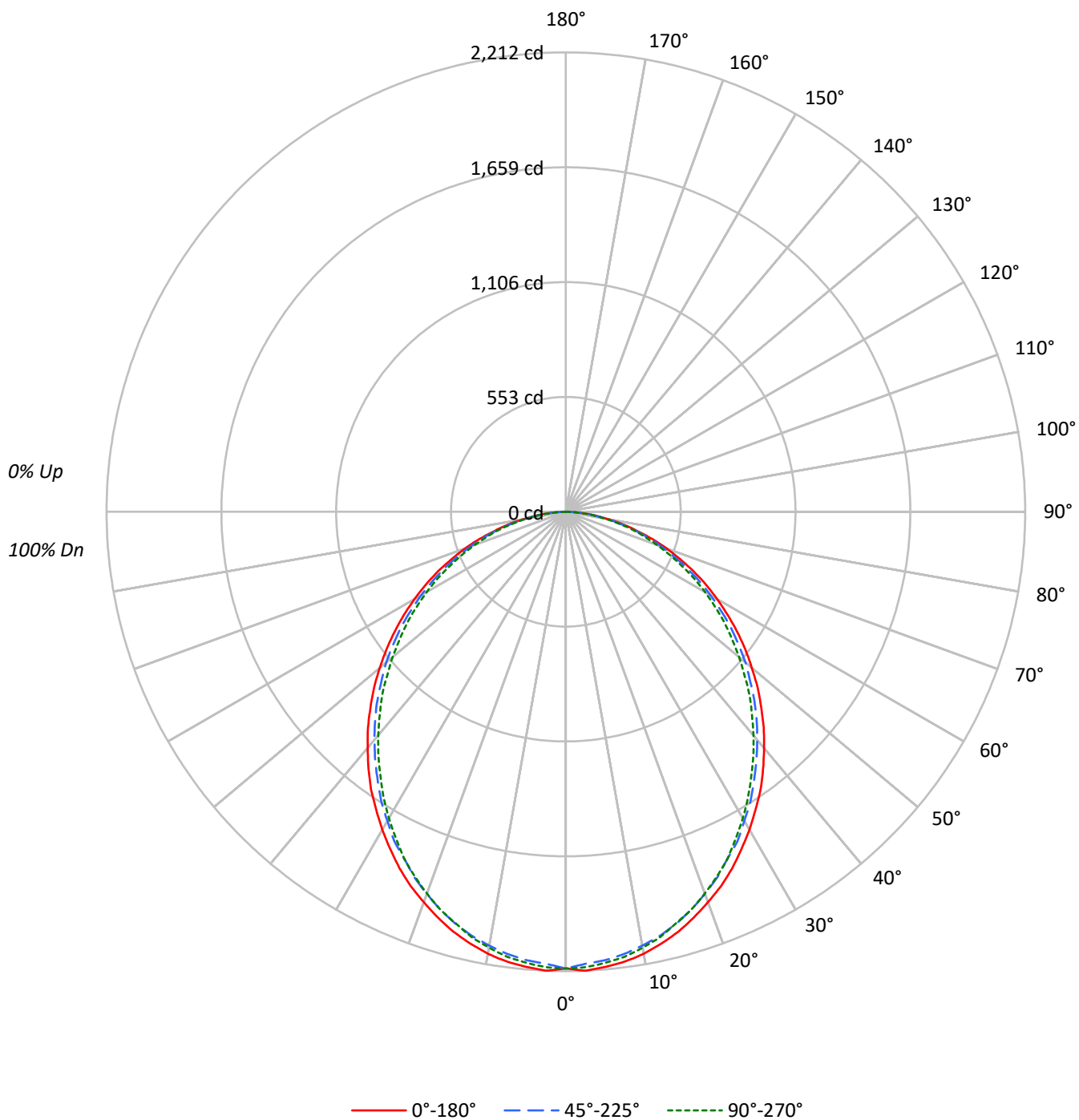
Lumens per Lamp: N/A
Luminaire Lumens: 5595.4 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 59.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931479

CATALOG NUMBER: DFN2DS-TR4F0-060DS830-FLL

Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1747	1747	1747
5°	1754	1729	1739
10°	1743	1711	1720
15°	1722	1689	1687
20°	1691	1655	1654
25°	1661	1615	1615
30°	1622	1577	1564
35°	1585	1532	1509
40°	1540	1487	1458
45°	1495	1442	1407
50°	1445	1396	1346
55°	1394	1342	1292
60°	1337	1277	1230
65°	1276	1213	1157
70°	1199	1134	1081
75°	1090	1045	1019
80°	968	938	890
85°	789	752	675

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1495 cd/sqm

TEST NUMBER: P931479

CATALOG NUMBER: DFN2DS-TR4F0-060DS830-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.0	3.7
10°-20°	582.4	10.4
20°-30°	855.9	15.3
30°-40°	994.1	17.8
40°-50°	992.8	17.7
50°-60°	865.7	15.5
60°-70°	639.9	11.4
70°-80°	362.1	6.5
80°-90°	95.6	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1645.3	29.4
0°-40°	2639.3	47.2
0°-60°	4497.9	80.4
0°-90°	5595.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5595.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2199	2199	2199	2199	2199	
5°	2199	2191	2168	2184	2180	209
15°	2094	2081	2053	2062	2051	590
25°	1895	1878	1842	1846	1842	872
35°	1635	1614	1580	1567	1556	1021
45°	1330	1315	1284	1260	1252	1027
55°	1007	994	969	943	933	900
65°	679	666	645	626	615	671
75°	355	351	340	328	332	379
85°	87	85	82	76	74	102
90°	0	0	0	0	0	

TEST NUMBER: P931479

CATALOG NUMBER: DFN2DS-TR4F0-060DS830-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2199.2	2199.2	2199.2	2199.2	2199.2
2.5°	2212.0	2201.5	2178.1	2199.2	2195.1
5°	2199.2	2190.9	2167.5	2184.4	2180.4
7.5°	2184.4	2171.9	2148.5	2165.6	2161.3
10°	2161.3	2146.5	2121.1	2138.0	2131.7
12.5°	2129.5	2116.9	2091.5	2102.1	2097.8
15°	2093.5	2081.0	2053.4	2061.9	2051.4
17.5°	2049.1	2036.6	2009.0	2019.5	2009.0
20°	2000.4	1987.9	1958.2	1964.5	1956.3
22.5°	1952.0	1932.9	1905.3	1905.3	1901.1
25°	1894.7	1878.0	1842.0	1846.0	1842.0
27.5°	1831.2	1816.5	1789.0	1782.8	1772.3
30°	1768.0	1750.9	1719.3	1713.0	1704.5
32.5°	1700.2	1687.7	1653.8	1641.0	1632.5
35°	1634.7	1613.6	1579.7	1566.9	1556.4
37.5°	1560.7	1541.6	1507.8	1492.9	1482.3
40°	1484.6	1467.5	1433.7	1414.9	1406.3
42.5°	1410.6	1393.5	1359.9	1338.6	1326.0
45°	1330.3	1315.4	1283.6	1260.5	1251.9
47.5°	1251.9	1237.1	1203.3	1179.9	1167.3
50°	1169.4	1158.8	1129.3	1099.6	1089.0
52.5°	1089.0	1074.3	1046.8	1023.6	1008.8
55°	1006.7	993.9	968.6	943.2	932.7
57.5°	924.2	913.6	886.0	860.7	852.1
60°	841.6	833.3	803.7	780.4	774.0
62.5°	761.2	746.4	725.3	704.2	695.8
65°	678.9	666.2	645.1	626.0	615.4
67.5°	594.3	583.6	564.7	549.9	541.4
70°	516.0	507.5	488.4	473.6	465.3
72.5°	435.7	427.2	416.6	401.9	395.5
75°	355.1	351.2	340.3	327.8	332.1
77.5°	283.4	274.9	270.5	264.3	258.0
80°	211.6	209.3	205.1	198.8	194.5
82.5°	143.8	143.8	141.8	133.3	133.3
85°	86.6	84.6	82.5	76.0	74.0
87.5°	38.2	33.9	29.6	23.4	21.1
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931479

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	13.22	14.83	13.59	15.15	15.46	12.78	14.39	13.14	14.70	15.02
	3H	14.97	16.43	15.35	16.75	17.11	14.48	15.93	14.86	16.26	16.62
	4H	15.62	16.99	16.02	17.33	17.71	15.12	16.49	15.52	16.84	17.22
	6H	16.09	17.36	16.50	17.72	18.11	15.59	16.85	16.00	17.22	17.61
	8H	16.23	17.44	16.65	17.83	18.23	15.73	16.94	16.15	17.33	17.73
	12H	16.32	17.48	16.75	17.86	18.29	15.81	16.97	16.24	17.35	17.78
4H	2H	13.78	15.15	14.18	15.50	15.87	13.43	14.80	13.83	15.15	15.52
	3H	15.76	16.90	16.17	17.30	17.70	15.35	16.50	15.76	16.89	17.29
	4H	16.53	17.57	16.96	17.98	18.42	16.11	17.15	16.54	17.56	18.00
	6H	17.13	18.03	17.58	18.48	18.93	16.70	17.60	17.15	18.04	18.50
	8H	17.32	18.17	17.78	18.61	19.07	16.88	17.73	17.34	18.17	18.64
	12H	17.45	18.21	17.93	18.69	19.16	17.00	17.76	17.48	18.23	18.70
8H	4H	16.81	17.65	17.27	18.10	18.56	16.43	17.28	16.89	17.72	18.19
	6H	17.52	18.22	18.01	18.71	19.19	17.14	17.84	17.63	18.33	18.81
	8H	17.78	18.41	18.29	18.92	19.40	17.39	18.02	17.90	18.53	19.01
	12H	17.98	18.54	18.49	19.03	19.59	17.57	18.12	18.07	18.62	19.18
12H	4H	16.83	17.59	17.31	18.07	18.54	16.47	17.23	16.95	17.70	18.17
	6H	17.57	18.20	18.08	18.70	19.19	17.20	17.83	17.71	18.34	18.82
	8H	17.88	18.44	18.39	18.93	19.49	17.50	18.06	18.01	18.55	19.11