

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: P931065

Luminaire Tested: DFN2DS-SQ4F0-060DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931065
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-SQ4F0-060DS830-FLL
Description: 4 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

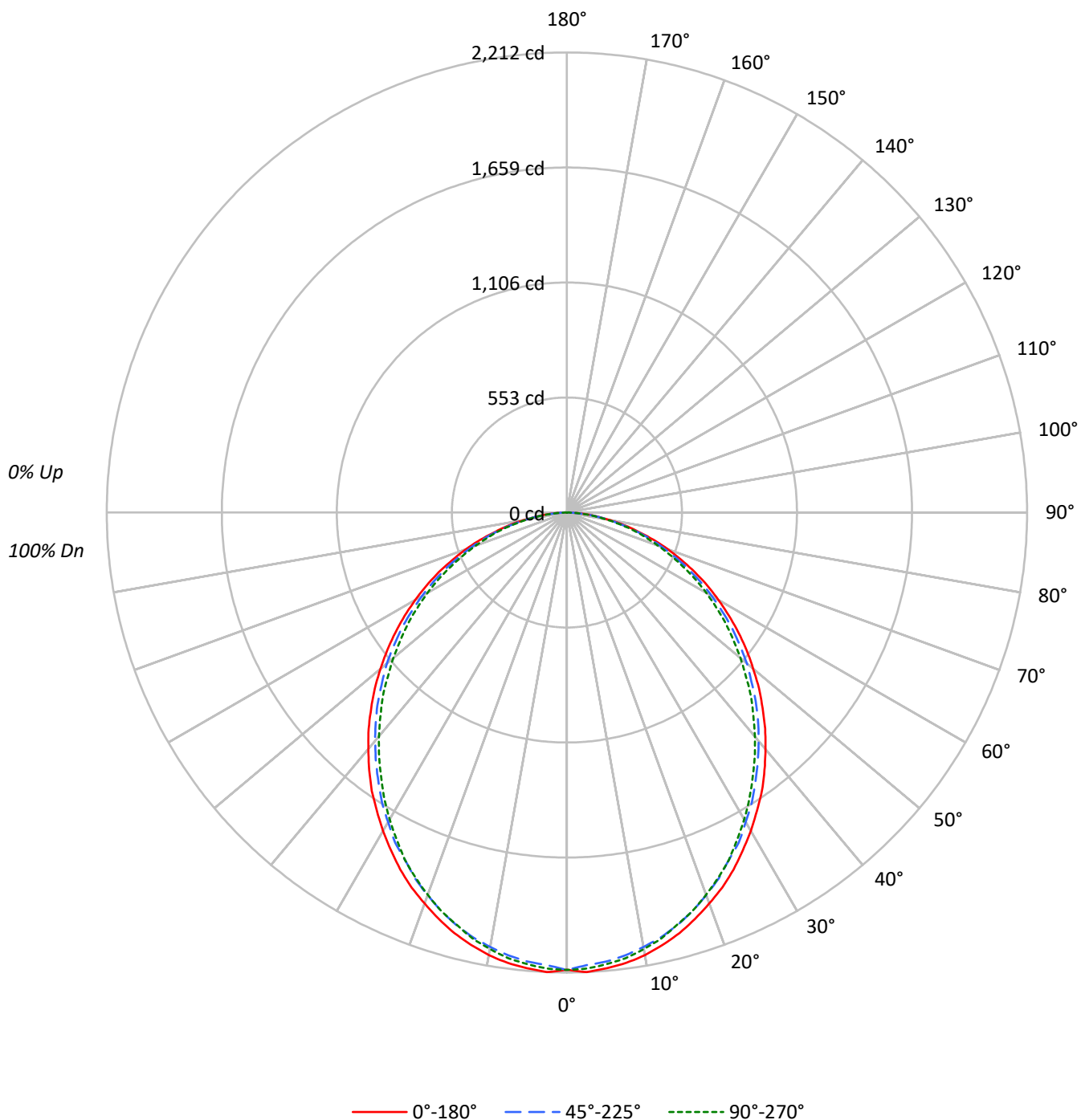
Lumens per Lamp: N/A
Luminaire Lumens: 5595.4 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 57.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.946
Total Harmonic Distortion (THDi): 0.132
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931065

CATALOG NUMBER: DFN2DS-SQ4F0-060DS830-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°	1543	1543	1543
5°	1549	1527	1536
10°	1540	1511	1519
15°	1521	1492	1490
20°	1494	1462	1461
25°	1467	1426	1426
30°	1432	1393	1381
35°	1400	1353	1333
40°	1360	1313	1288
45°	1320	1274	1242
50°	1277	1233	1189
55°	1232	1185	1141
60°	1181	1128	1086
65°	1127	1071	1022
70°	1059	1002	955
75°	963	923	900
80°	855	829	786
85°	697	664	596

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1320 cd/sqm

TEST NUMBER: P931065

CATALOG NUMBER: DFN2DS-SQ4F0-060DS830-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	

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CATALOG NUMBER: DFN2DS-SQ4F0-060DS830-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

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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	12.79	14.40	13.15	14.71	15.03	12.35	13.96	12.71	14.27	14.58
	3H	14.54	15.99	14.92	16.32	16.68	14.05	15.50	14.43	15.83	16.19
	4H	15.19	16.56	15.58	16.90	17.28	14.69	16.06	15.09	16.41	16.78
	6H	15.66	16.92	16.07	17.29	17.68	15.15	16.42	15.57	16.79	17.18
	8H	15.80	17.01	16.22	17.40	17.80	15.30	16.51	15.72	16.90	17.29
	12H	15.89	17.05	16.32	17.43	17.86	15.38	16.54	15.81	16.92	17.35
4H	2H	13.35	14.72	13.75	15.07	15.44	13.00	14.37	13.40	14.71	15.09
	3H	15.33	16.47	15.74	16.87	17.27	14.92	16.06	15.33	16.46	16.86
	4H	16.10	17.14	16.53	17.55	17.99	15.68	16.71	16.11	17.13	17.56
	6H	16.70	17.60	17.15	18.04	18.50	16.27	17.17	16.72	17.61	18.07
	8H	16.89	17.73	17.35	18.18	18.64	16.45	17.30	16.91	17.74	18.20
	12H	17.02	17.78	17.50	18.26	18.73	16.57	17.33	17.05	17.80	18.27
8H	4H	16.38	17.22	16.84	17.66	18.13	16.00	16.85	16.46	17.29	17.76
	6H	17.09	17.79	17.58	18.28	18.76	16.71	17.41	17.20	17.90	18.37
	8H	17.35	17.98	17.86	18.49	18.97	16.96	17.59	17.47	18.09	18.58
	12H	17.55	18.11	18.06	18.60	19.16	17.14	17.69	17.64	18.18	18.74
12H	4H	16.40	17.16	16.88	17.64	18.11	16.04	16.80	16.52	17.27	17.74
	6H	17.13	17.77	17.64	18.27	18.76	16.77	17.40	17.28	17.90	18.39
	8H	17.45	18.01	17.96	18.50	19.06	17.07	17.63	17.58	18.12	18.68

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

7 of 7