

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: P930964

Luminaire Tested: DFN2DS-SQ3F0-070DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930964
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-070DS850-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

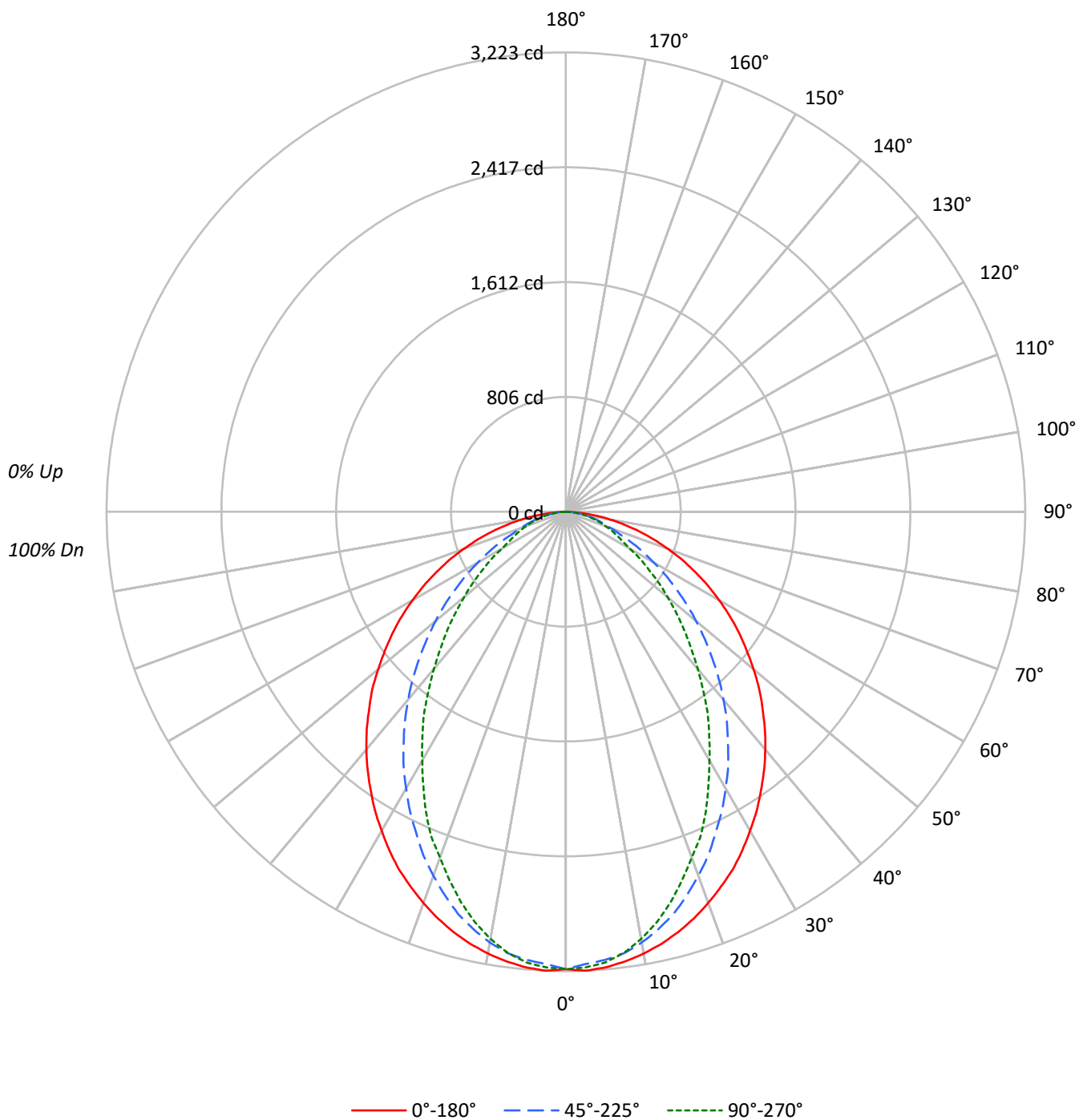
Lumens per Lamp: N/A
Luminaire Lumens: 6598.5 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3676	3676	3676
5°	3690	3630	3650
10°	3662	3571	3540
15°	3620	3465	3365
20°	3562	3314	3147
25°	3502	3142	2937
30°	3419	2966	2666
35°	3339	2774	2429
40°	3257	2575	2154
45°	3162	2353	1905
50°	3064	2127	1662
55°	2964	1885	1427
60°	2848	1630	1185
65°	2716	1370	1078
70°	2558	1128	992
75°	2365	1028	926
80°	2088	919	844
85°	1641	724	724

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3162 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.7	4.6
10°-20°	825.5	12.5
20°-30°	1158.9	17.6
30°-40°	1263.3	19.1
40°-50°	1161.1	17.6
50°-60°	911.9	13.8
60°-70°	593.5	9.0
70°-80°	305.5	4.6
80°-90°	78.0	1.2
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°	2285.1	34.6
0°-40°	3548.4	53.8
0°-60°	5621.4	85.2
0°-90°	6598.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6598.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3208	3208	3208	3208	3208	
5°	3208	3194	3156	3182	3174	304
15°	3052	3020	2921	2866	2837	860
25°	2770	2677	2485	2366	2323	1274
35°	2387	2239	1983	1800	1736	1494
45°	1951	1756	1452	1246	1176	1507
55°	1484	1257	944	770	714	1326
65°	1002	766	505	407	398	993
75°	534	331	232	212	209	565
85°	125	64	55	55	55	150
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3208.4	3208.4	3208.4	3208.4	3208.4
2.5°	3222.9	3208.4	3176.4	3205.7	3199.8
5°	3208.4	3193.9	3156.1	3182.3	3173.6
7.5°	3182.3	3165.0	3124.4	3135.7	3121.3
10°	3147.5	3127.2	3069.2	3060.3	3043.0
12.5°	3104.0	3077.8	2999.3	2982.0	2949.9
15°	3051.6	3019.6	2921.0	2865.9	2836.9
17.5°	2990.6	2944.2	2822.2	2758.3	2711.8
20°	2921.0	2862.8	2717.7	2645.3	2581.2
22.5°	2845.6	2778.7	2610.1	2511.6	2468.2
25°	2770.1	2677.0	2485.4	2366.5	2322.8
27.5°	2680.1	2581.2	2369.3	2232.9	2166.0
30°	2584.3	2473.7	2241.4	2093.6	2015.1
32.5°	2491.3	2357.6	2119.7	1945.4	1872.7
35°	2386.8	2238.6	1983.3	1800.4	1736.3
37.5°	2285.2	2125.3	1855.5	1654.8	1582.5
40°	2177.6	2003.6	1721.7	1515.7	1440.1
42.5°	2067.4	1881.6	1588.3	1373.3	1301.0
45°	1951.3	1756.5	1451.9	1245.5	1175.9
47.5°	1840.9	1634.9	1321.3	1114.9	1051.1
50°	1719.0	1512.9	1193.4	992.9	932.2
52.5°	1599.7	1381.9	1071.4	879.8	824.7
55°	1483.6	1257.2	943.5	769.5	714.4
57.5°	1364.7	1132.4	830.5	667.8	621.4
60°	1242.7	1010.4	711.3	563.5	516.9
62.5°	1123.7	891.5	609.6	470.4	447.3
65°	1001.8	766.4	505.3	406.7	397.7
67.5°	885.6	650.3	406.7	357.0	348.4
70°	763.7	537.2	336.7	307.7	296.0
72.5°	647.5	432.5	281.6	258.5	252.6
75°	534.2	330.8	232.2	211.9	209.2
77.5°	421.1	235.0	183.0	171.2	165.5
80°	316.4	168.5	139.3	127.9	127.9
82.5°	220.6	113.3	95.8	89.9	89.9
85°	124.8	63.8	55.1	55.1	55.1
87.5°	46.5	23.1	23.1	20.3	20.3
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	15.76	17.28	16.12	17.59	17.91	11.72	13.24	12.08	13.55	13.87
	3H	17.52	18.89	17.90	19.22	19.58	12.98	14.35	13.36	14.68	15.04
	4H	18.19	19.47	18.59	19.82	20.20	13.48	14.77	13.88	15.11	15.49
	6H	18.68	19.86	19.09	20.23	20.62	13.87	15.05	14.28	15.42	15.81
	8H	18.84	19.97	19.27	20.36	20.76	13.99	15.12	14.42	15.51	15.91
	12H	18.95	20.03	19.38	20.41	20.84	14.07	15.15	14.50	15.53	15.96
4H	2H	15.86	17.14	16.26	17.49	17.87	12.41	13.69	12.81	14.04	14.42
	3H	17.80	18.86	18.21	19.26	19.66	13.86	14.92	14.27	15.32	15.72
	4H	18.54	19.50	18.98	19.92	20.36	14.46	15.41	14.89	15.83	16.27
	6H	19.14	19.97	19.59	20.41	20.87	14.94	15.78	15.40	16.22	16.68
	8H	19.35	20.13	19.81	20.57	21.04	15.11	15.88	15.57	16.33	16.80
	12H	19.50	20.20	19.99	20.68	21.15	15.22	15.92	15.71	16.40	16.87
8H	4H	18.57	19.35	19.03	19.79	20.26	14.81	15.59	15.27	16.03	16.50
	6H	19.21	19.85	19.70	20.34	20.82	15.40	16.04	15.89	16.53	17.01
	8H	19.46	20.03	19.97	20.54	21.03	15.62	16.19	16.13	16.70	17.19
	12H	19.66	20.17	20.17	20.66	21.23	15.80	16.31	16.31	16.80	17.36
12H	4H	18.55	19.25	19.04	19.73	20.20	14.85	15.55	15.34	16.03	16.50
	6H	19.19	19.76	19.70	20.27	20.76	15.46	16.04	15.97	16.55	17.04
	8H	19.47	19.98	19.98	20.47	21.04	15.73	16.24	16.24	16.74	17.30