

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: P930872

Luminaire Tested: DFN2DS-SQ2F0-070DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930872
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-SQ2F0-070DS840-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

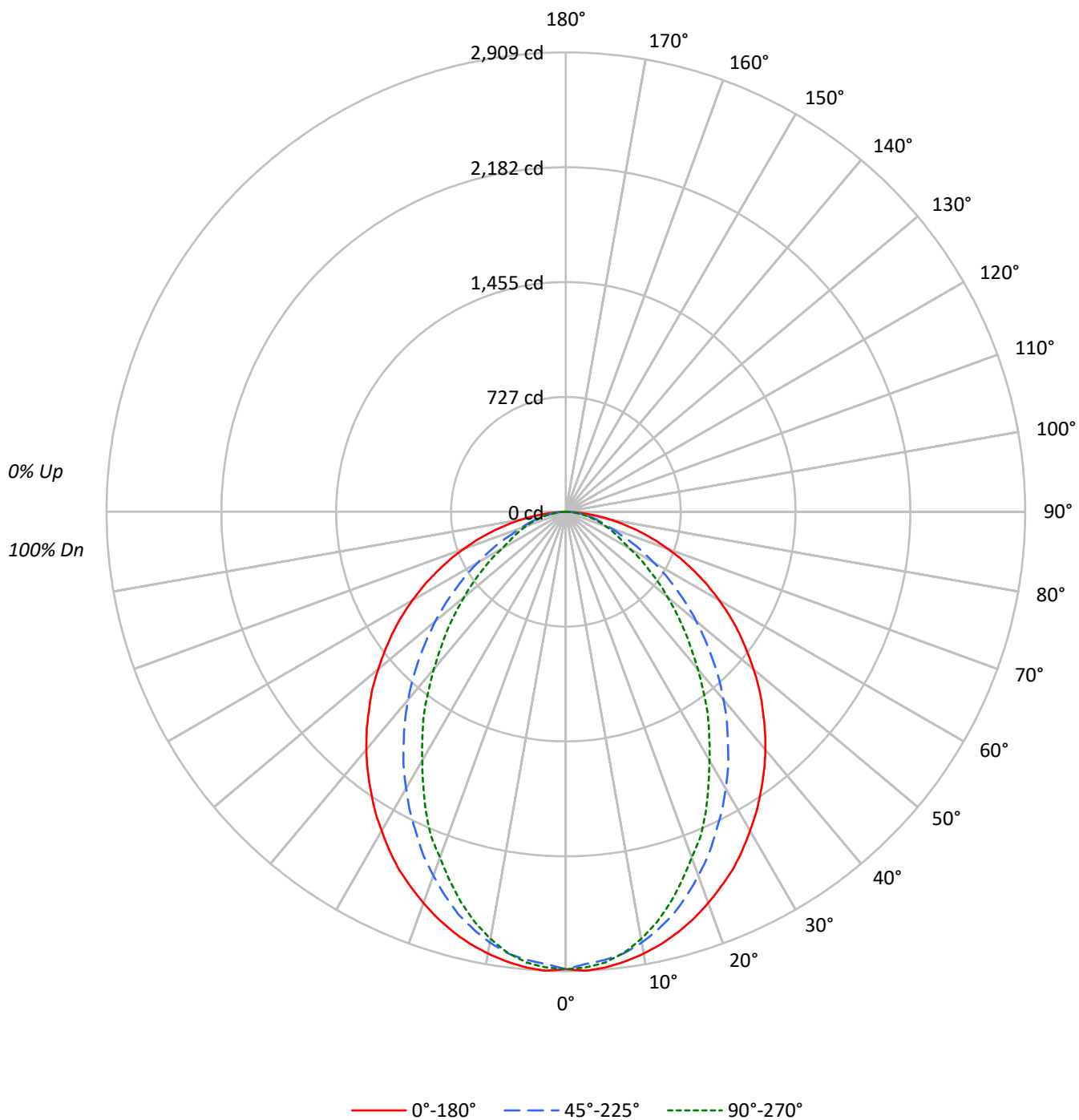
Lumens per Lamp: N/A
Luminaire Lumens: 5955.9 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
Total Harmonic Distortion (THDi): 0.049
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°	6368	6368	6368
5°	6392	6288	6323
10°	6343	6186	6133
15°	6271	6002	5829
20°	6169	5740	5452
25°	6066	5443	5087
30°	5923	5137	4618
35°	5783	4806	4207
40°	5642	4461	3731
45°	5477	4075	3301
50°	5307	3685	2878
55°	5134	3265	2472
60°	4933	2823	2052
65°	4705	2373	1868
70°	4432	1954	1718
75°	4097	1781	1604
80°	3617	1592	1461
85°	2841	1254	1254

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5477 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.4	4.6
10°-20°	745.1	12.5
20°-30°	1046.1	17.6
30°-40°	1140.3	19.1
40°-50°	1048.1	17.6
50°-60°	823.1	13.8
60°-70°	535.7	9.0
70°-80°	275.8	4.6
80°-90°	70.4	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°	2062.6	34.6
0°-40°	3202.9	53.8
0°-60°	5074.0	85.2
0°-90°	5955.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5955.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2896	2896	2896	2896	2896	
5°	2896	2883	2849	2872	2865	275
15°	2754	2726	2636	2587	2561	776
25°	2500	2416	2243	2136	2097	1150
35°	2154	2021	1790	1625	1567	1348
45°	1761	1586	1310	1124	1061	1360
55°	1339	1135	852	695	645	1197
65°	904	692	456	367	359	896
75°	482	299	210	191	189	510
85°	113	58	50	50	50	135
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2896.0	2896.0	2896.0	2896.0	2896.0
2.5°	2909.0	2896.0	2867.1	2893.5	2888.2
5°	2896.0	2882.9	2848.7	2872.4	2864.6
7.5°	2872.4	2856.8	2820.1	2830.3	2817.3
10°	2840.9	2822.6	2770.3	2762.3	2746.6
12.5°	2801.7	2778.1	2707.2	2691.6	2662.7
15°	2754.5	2725.5	2636.5	2586.8	2560.7
17.5°	2699.4	2657.5	2547.3	2489.7	2447.7
20°	2636.5	2584.0	2453.1	2387.7	2329.8
22.5°	2568.5	2508.1	2356.0	2267.0	2227.8
25°	2500.3	2416.3	2243.3	2136.0	2096.6
27.5°	2419.1	2329.8	2138.5	2015.4	1955.1
30°	2332.6	2232.8	2023.1	1889.7	1818.8
32.5°	2248.6	2128.0	1913.3	1756.0	1690.3
35°	2154.4	2020.6	1790.2	1625.0	1567.2
37.5°	2062.7	1918.3	1674.8	1493.7	1428.4
40°	1965.6	1808.5	1554.1	1368.1	1299.9
42.5°	1866.1	1698.4	1433.6	1239.5	1174.3
45°	1761.3	1585.5	1310.5	1124.2	1061.4
47.5°	1661.7	1475.7	1192.6	1006.3	948.7
50°	1551.5	1365.6	1077.2	896.2	841.4
52.5°	1443.9	1247.3	967.1	794.1	744.3
55°	1339.1	1134.7	851.7	694.6	644.8
57.5°	1231.8	1022.1	749.6	602.8	560.9
60°	1121.7	912.0	642.0	508.6	466.6
62.5°	1014.3	804.7	550.2	424.6	403.7
65°	904.2	691.8	456.1	367.1	359.0
67.5°	799.4	587.0	367.1	322.2	314.5
70°	689.3	484.9	303.9	277.8	267.2
72.5°	584.5	390.4	254.2	233.3	228.0
75°	482.2	298.6	209.6	191.3	188.8
77.5°	380.1	212.1	165.2	154.6	149.3
80°	285.6	152.1	125.7	115.4	115.4
82.5°	199.1	102.3	86.5	81.2	81.2
85°	112.6	57.6	49.7	49.7	49.7
87.5°	41.9	20.8	20.8	18.3	18.3
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	17.67	19.19	18.03	19.50	19.82	13.63	15.15	13.99	15.46	15.78
	3H	19.43	20.80	19.81	21.12	21.49	14.89	16.26	15.27	16.59	16.95
	4H	20.10	21.38	20.50	21.73	22.11	15.39	16.67	15.79	17.02	17.40
	6H	20.59	21.77	21.00	22.14	22.53	15.77	16.96	16.19	17.32	17.72
	8H	20.75	21.88	21.18	22.27	22.67	15.90	17.03	16.33	17.42	17.82
	12H	20.86	21.93	21.29	22.32	22.75	15.98	17.06	16.41	17.44	17.87
4H	2H	17.77	19.05	18.17	19.40	19.78	14.32	15.60	14.72	15.95	16.33
	3H	19.70	20.77	20.11	21.17	21.57	15.77	16.83	16.18	17.23	17.63
	4H	20.45	21.41	20.89	21.83	22.26	16.37	17.32	16.80	17.74	18.18
	6H	21.05	21.88	21.50	22.32	22.78	16.85	17.69	17.31	18.13	18.59
	8H	21.26	22.04	21.72	22.48	22.95	17.02	17.79	17.48	18.24	18.70
	12H	21.41	22.11	21.90	22.59	23.06	17.13	17.83	17.61	18.31	18.78
8H	4H	20.48	21.25	20.94	21.70	22.17	16.72	17.50	17.18	17.94	18.41
	6H	21.12	21.76	21.61	22.25	22.73	17.31	17.95	17.80	18.44	18.92
	8H	21.37	21.94	21.88	22.45	22.94	17.53	18.10	18.04	18.61	19.10
	12H	21.57	22.08	22.08	22.57	23.14	17.71	18.22	18.22	18.71	19.27
12H	4H	20.46	21.16	20.94	21.63	22.11	16.76	17.46	17.24	17.94	18.41
	6H	21.10	21.67	21.61	22.18	22.67	17.37	17.95	17.88	18.46	18.94
	8H	21.38	21.89	21.89	22.38	22.95	17.64	18.15	18.15	18.64	19.21