

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: P930956

Luminaire Tested: DFN2DS-SQ3F0-060DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930956
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-SQ3F0-060DS950-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

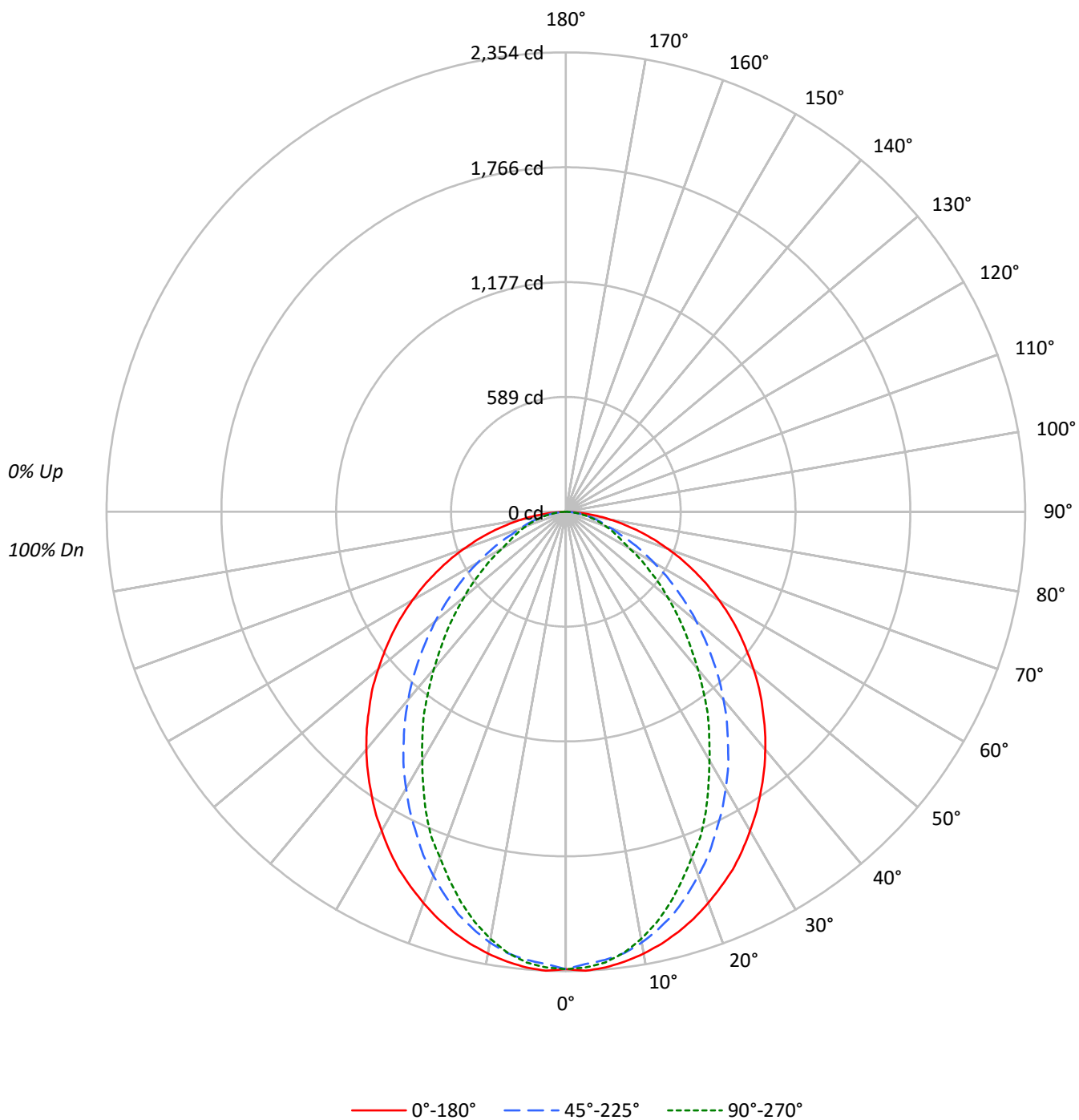
Lumens per Lamp: N/A
Luminaire Lumens: 4819.5 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 59.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
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°	2685	2685	2685
5°	2695	2651	2666
10°	2675	2608	2586
15°	2644	2531	2458
20°	2601	2420	2299
25°	2558	2295	2145
30°	2497	2166	1947
35°	2438	2026	1774
40°	2379	1881	1573
45°	2309	1718	1392
50°	2238	1554	1214
55°	2165	1377	1042
60°	2080	1191	865
65°	1984	1000	788
70°	1868	824	724
75°	1727	751	676
80°	1525	671	616
85°	1198	530	530

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2309 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.6	4.6
10°-20°	602.9	12.5
20°-30°	846.5	17.6
30°-40°	922.7	19.1
40°-50°	848.1	17.6
50°-60°	666.0	13.8
60°-70°	433.5	9.0
70°-80°	223.2	4.6
80°-90°	57.0	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°	1669.0	34.6
0°-40°	2591.7	53.8
0°-60°	4105.8	85.2
0°-90°	4819.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4819.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2343	2343	2343	2343	2343	
5°	2343	2333	2305	2324	2318	222
15°	2229	2205	2133	2093	2072	628
25°	2023	1955	1815	1728	1697	930
35°	1743	1635	1449	1315	1268	1091
45°	1425	1283	1060	910	859	1101
55°	1084	918	689	562	522	968
65°	732	560	369	297	290	725
75°	390	242	170	155	153	413
85°	91	47	40	40	40	109
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2343.4	2343.4	2343.4	2343.4	2343.4
2.5°	2354.0	2343.4	2320.0	2341.3	2337.1
5°	2343.4	2332.8	2305.1	2324.3	2318.0
7.5°	2324.3	2311.7	2282.0	2290.3	2279.7
10°	2298.8	2284.0	2241.7	2235.2	2222.5
12.5°	2267.1	2248.0	2190.6	2178.0	2154.6
15°	2228.9	2205.4	2133.4	2093.2	2072.0
17.5°	2184.4	2150.3	2061.2	2014.6	1980.7
20°	2133.4	2090.9	1985.0	1932.1	1885.3
22.5°	2078.3	2029.5	1906.4	1834.4	1802.7
25°	2023.2	1955.3	1815.3	1728.5	1696.6
27.5°	1957.6	1885.3	1730.5	1630.8	1582.0
30°	1887.5	1806.7	1637.1	1529.1	1471.7
32.5°	1819.6	1722.0	1548.3	1420.9	1367.8
35°	1743.3	1635.1	1448.6	1314.9	1268.1
37.5°	1669.1	1552.3	1355.2	1208.7	1155.8
40°	1590.5	1463.4	1257.5	1107.0	1051.9
42.5°	1510.0	1374.3	1160.1	1003.0	950.2
45°	1425.2	1282.9	1060.5	909.7	858.8
47.5°	1344.6	1194.1	965.0	814.3	767.7
50°	1255.5	1105.0	871.7	725.2	680.9
52.5°	1168.4	1009.4	782.6	642.6	602.3
55°	1083.6	918.3	689.2	562.1	521.7
57.5°	996.8	827.1	606.6	487.8	453.8
60°	907.7	738.0	519.6	411.5	377.5
62.5°	820.8	651.2	445.3	343.6	326.7
65°	731.7	559.8	369.0	297.0	290.5
67.5°	646.9	475.0	297.0	260.8	254.5
70°	557.7	392.4	245.9	224.8	216.2
72.5°	473.0	315.9	205.6	188.8	184.5
75°	390.2	241.6	169.6	154.8	152.8
77.5°	307.6	171.7	133.6	125.1	120.9
80°	231.1	123.0	101.7	93.4	93.4
82.5°	161.1	82.8	69.9	65.7	65.7
85°	91.1	46.6	40.3	40.3	40.3
87.5°	34.0	16.9	16.9	14.8	14.8
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	14.67	16.19	15.03	16.50	16.82	10.63	12.15	10.99	12.46	12.78
	3H	16.43	17.80	16.81	18.12	18.49	11.89	13.26	12.27	13.59	13.95
	4H	17.10	18.38	17.50	18.73	19.11	12.39	13.67	12.79	14.02	14.40
	6H	17.59	18.77	18.00	19.14	19.53	12.78	13.96	13.19	14.32	14.72
	8H	17.75	18.88	18.18	19.27	19.67	12.90	14.03	13.33	14.42	14.82
	12H	17.86	18.93	18.29	19.32	19.74	12.98	14.06	13.41	14.44	14.87
4H	2H	14.77	16.05	15.17	16.40	16.78	11.32	12.60	11.72	12.95	13.33
	3H	16.70	17.77	17.11	18.17	18.57	12.77	13.83	13.18	14.23	14.63
	4H	17.45	18.41	17.89	18.83	19.26	13.36	14.32	13.80	14.74	15.18
	6H	18.04	18.88	18.50	19.32	19.78	13.85	14.69	14.31	15.13	15.59
	8H	18.26	19.04	18.72	19.48	19.95	14.02	14.79	14.48	15.24	15.70
	12H	18.41	19.11	18.89	19.59	20.06	14.13	14.83	14.61	15.31	15.78
8H	4H	17.48	18.25	17.94	18.70	19.17	13.72	14.50	14.18	14.94	15.41
	6H	18.11	18.76	18.61	19.25	19.73	14.31	14.95	14.80	15.44	15.92
	8H	18.36	18.94	18.88	19.45	19.94	14.53	15.10	15.04	15.61	16.10
	12H	18.57	19.08	19.08	19.57	20.14	14.71	15.22	15.22	15.71	16.27
12H	4H	17.46	18.16	17.94	18.63	19.11	13.76	14.46	14.24	14.93	15.41
	6H	18.10	18.67	18.61	19.18	19.67	14.37	14.95	14.88	15.46	15.94
	8H	18.38	18.89	18.89	19.38	19.95	14.64	15.15	15.15	15.64	16.21

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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