

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: P931116

Luminaire Tested: DFN2DS-SQ4F0-080DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931116
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-SQ4F0-080DS940-RLL
Description: 4 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

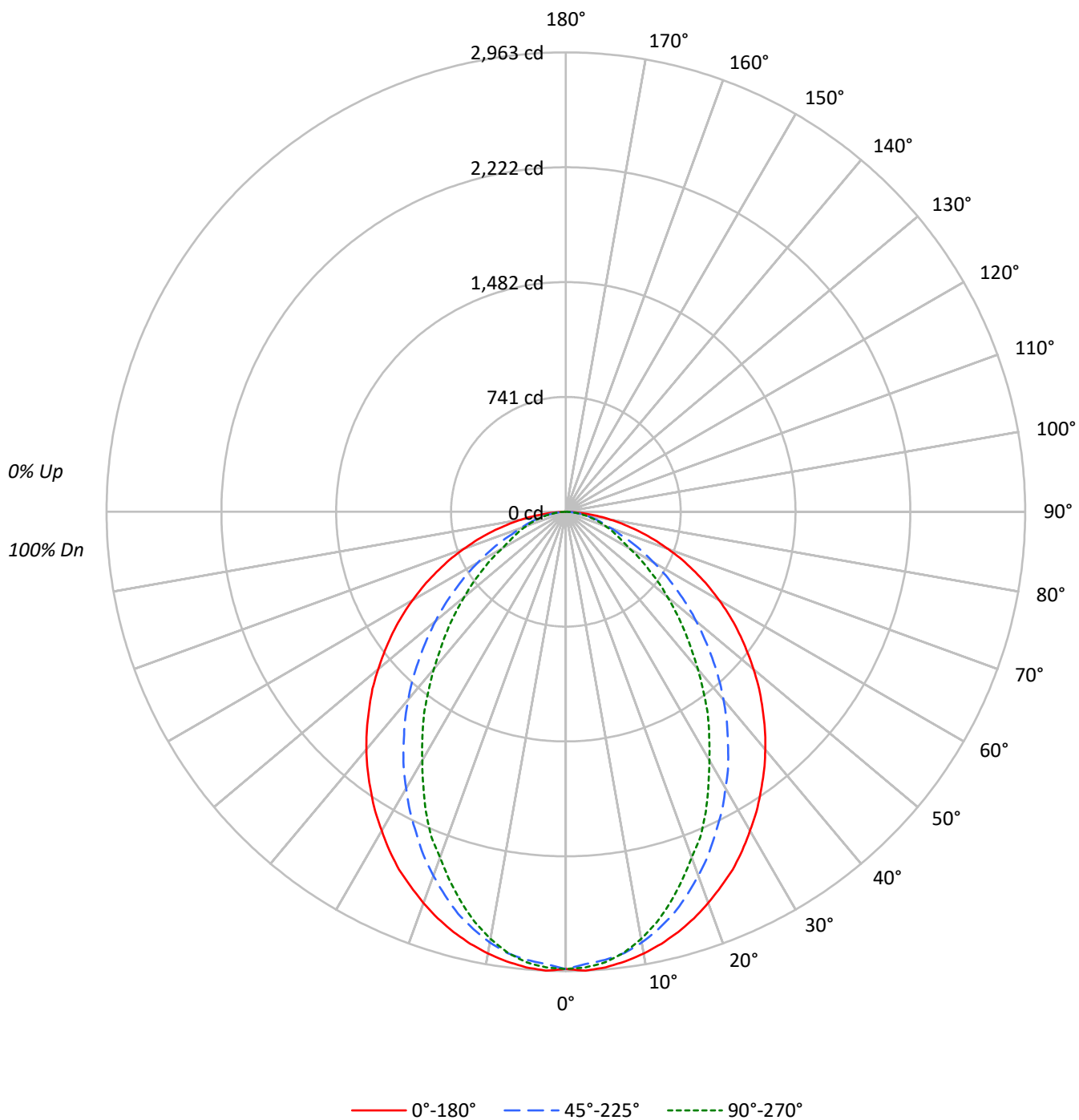
Lumens per Lamp: N/A
Luminaire Lumens: 6065.6 lumens
Efficiency: N/A
Efficacy: 76.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 79.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
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°	2069	2069	2069
5°	2077	2043	2055
10°	2061	2010	1993
15°	2038	1951	1894
20°	2005	1865	1772
25°	1971	1769	1653
30°	1925	1669	1501
35°	1879	1562	1367
40°	1834	1450	1213
45°	1780	1324	1073
50°	1725	1198	935
55°	1668	1061	803
60°	1603	918	667
65°	1529	771	607
70°	1440	635	558
75°	1331	579	521
80°	1175	517	475
85°	923	408	408

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1780 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.4	4.6
10°-20°	758.8	12.5
20°-30°	1065.3	17.6
30°-40°	1161.3	19.1
40°-50°	1067.3	17.6
50°-60°	838.3	13.8
60°-70°	545.6	9.0
70°-80°	280.9	4.6
80°-90°	71.7	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°	2100.6	34.6
0°-40°	3261.8	53.8
0°-60°	5167.4	85.2
0°-90°	6065.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6065.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2949	2949	2949	2949	2949	
5°	2949	2936	2901	2925	2917	280
15°	2805	2776	2685	2634	2608	790
25°	2546	2461	2285	2175	2135	1171
35°	2194	2058	1823	1655	1596	1373
45°	1794	1615	1335	1145	1081	1385
55°	1364	1156	867	707	657	1219
65°	921	704	464	374	366	913
75°	491	304	214	195	192	519
85°	115	59	51	51	51	138
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2949.3	2949.3	2949.3	2949.3	2949.3
2.5°	2962.6	2949.3	2919.9	2946.7	2941.4
5°	2949.3	2936.0	2901.1	2925.2	2917.3
7.5°	2925.2	2909.3	2872.0	2882.5	2869.1
10°	2893.2	2874.6	2821.3	2813.1	2797.2
12.5°	2853.3	2829.2	2757.0	2741.1	2711.7
15°	2805.2	2775.7	2685.1	2634.4	2607.8
17.5°	2749.1	2706.3	2594.2	2535.6	2492.8
20°	2685.1	2631.6	2498.2	2431.7	2372.7
22.5°	2615.7	2554.2	2399.4	2308.8	2268.8
25°	2546.3	2460.8	2284.7	2175.4	2135.2
27.5°	2463.6	2372.7	2177.9	2052.5	1991.0
30°	2375.6	2273.9	2060.4	1924.5	1852.2
32.5°	2290.0	2167.2	1948.6	1788.3	1721.5
35°	2194.1	2057.8	1823.1	1654.9	1596.0
37.5°	2100.6	1953.7	1705.6	1521.2	1454.7
40°	2001.8	1841.8	1582.7	1393.2	1323.8
42.5°	1900.4	1729.7	1460.0	1262.4	1195.8
45°	1793.6	1614.7	1334.6	1144.9	1080.9
47.5°	1692.3	1502.8	1214.5	1024.8	966.2
50°	1580.1	1390.7	1097.1	912.7	856.9
52.5°	1470.6	1270.3	984.9	808.8	758.1
55°	1363.8	1155.7	867.4	707.4	656.7
57.5°	1254.5	1041.0	763.5	614.0	571.1
60°	1142.3	928.8	653.8	517.9	475.2
62.5°	1033.0	819.5	560.4	432.4	411.2
65°	920.9	704.5	464.4	373.8	365.5
67.5°	814.1	597.8	373.8	328.2	320.3
70°	702.0	493.9	309.5	282.9	272.1
72.5°	595.2	397.6	258.9	237.6	232.2
75°	491.0	304.2	213.5	194.8	192.3
77.5°	387.1	216.0	168.2	157.4	152.1
80°	290.8	154.9	128.0	117.5	117.5
82.5°	202.8	104.2	88.0	82.7	82.7
85°	114.7	58.6	50.7	50.7	50.7
87.5°	42.7	21.2	21.2	18.7	18.7
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	13.76	15.28	14.13	15.60	15.91	9.72	11.24	10.09	11.56	11.87
	3H	15.53	16.89	15.90	17.22	17.58	10.99	12.35	11.37	12.68	13.04
	4H	16.19	17.47	16.59	17.82	18.20	11.49	12.77	11.89	13.12	13.50
	6H	16.68	17.87	17.09	18.23	18.62	11.87	13.05	12.28	13.42	13.81
	8H	16.85	17.97	17.27	18.36	18.76	11.99	13.12	12.42	13.51	13.91
	12H	16.95	18.03	17.38	18.41	18.84	12.08	13.15	12.51	13.54	13.97
4H	2H	13.87	15.15	14.27	15.50	15.87	10.42	11.70	10.82	12.05	12.43
	3H	15.80	16.86	16.21	17.26	17.66	11.86	12.92	12.27	13.32	13.72
	4H	16.55	17.51	16.98	17.92	18.36	12.46	13.42	12.89	13.83	14.27
	6H	17.14	17.97	17.60	18.41	18.87	12.95	13.78	13.41	14.22	14.68
	8H	17.35	18.13	17.82	18.58	19.04	13.11	13.89	13.57	14.33	14.80
	12H	17.51	18.20	17.99	18.68	19.15	13.23	13.92	13.71	14.40	14.87
8H	4H	16.57	17.35	17.04	17.79	18.26	12.81	13.59	13.28	14.04	14.50
	6H	17.21	17.85	17.71	18.34	18.82	13.40	14.04	13.90	14.53	15.01
	8H	17.46	18.04	17.97	18.55	19.03	13.62	14.20	14.14	14.71	15.20
	12H	17.66	18.17	18.17	18.67	19.23	13.80	14.31	14.31	14.80	15.37
12H	4H	16.56	17.25	17.04	17.73	18.20	12.86	13.55	13.34	14.03	14.50
	6H	17.19	17.77	17.70	18.28	18.77	13.46	14.04	13.98	14.55	15.04
	8H	17.48	17.99	17.98	18.48	19.04	13.74	14.25	14.25	14.74	15.30