

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: P930900

Luminaire Tested: DFN2DS-SQ2F0-080DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930900
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-SQ2F0-080DS940-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

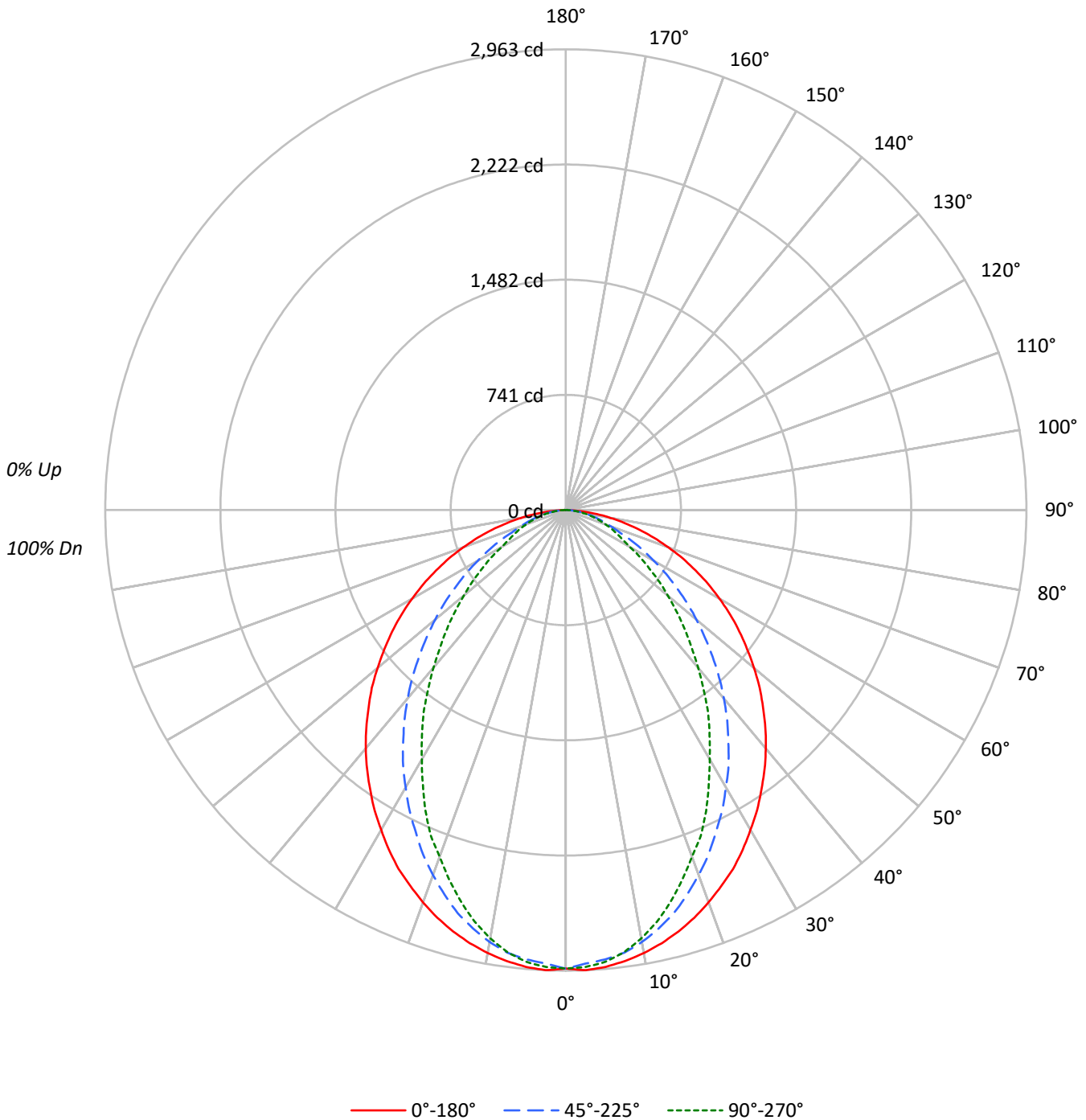
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6065.6 lumens
Efficiency: N/A
Efficacy: 73.4 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): 82.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9957
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		0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	86	
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	76	74	
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	66	64	
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	57	55	
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	51	49	
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	43	
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	41	39	
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	37	35	
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	34	32	
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	31	29	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6485	6485	6485
5°	6510	6404	6439
10°	6460	6299	6246
15°	6386	6113	5937
20°	6283	5846	5552
25°	6178	5543	5180
30°	6032	5231	4703
35°	5890	4894	4284
40°	5746	4543	3800
45°	5578	4150	3361
50°	5405	3753	2931
55°	5228	3325	2518
60°	5024	2875	2090
65°	4791	2416	1902
70°	4513	1990	1749
75°	4171	1814	1634
80°	3682	1621	1488
85°	2894	1279	1279

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5578 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	17.73	19.25	18.10	19.57	19.88	13.69	15.21	14.06	15.53	15.84
	3H	19.50	20.86	19.87	21.19	21.55	14.96	16.32	15.33	16.65	17.01
	4H	20.16	21.44	20.56	21.79	22.17	15.46	16.74	15.86	17.09	17.47
	6H	20.65	21.83	21.06	22.20	22.59	15.84	17.02	16.25	17.39	17.78
	8H	20.82	21.94	21.24	22.33	22.73	15.96	17.09	16.39	17.48	17.88
	12H	20.92	22.00	21.35	22.38	22.81	16.04	17.12	16.47	17.50	17.93
4H	2H	17.83	19.11	18.23	19.46	19.84	14.39	15.67	14.79	16.02	16.39
	3H	19.77	20.83	20.18	21.23	21.63	15.83	16.89	16.24	17.29	17.69
	4H	20.52	21.47	20.95	21.89	22.33	16.43	17.39	16.86	17.80	18.24
	6H	21.11	21.94	21.57	22.38	22.84	16.92	17.75	17.37	18.19	18.65
	8H	21.32	22.10	21.79	22.54	23.01	17.08	17.86	17.54	18.30	18.77
	12H	21.48	22.17	21.96	22.65	23.12	17.20	17.89	17.68	18.37	18.84
8H	4H	20.54	21.32	21.00	21.76	22.23	16.78	17.56	17.25	18.00	18.47
	6H	21.18	21.82	21.68	22.31	22.79	17.37	18.01	17.87	18.50	18.98
	8H	21.43	22.01	21.94	22.52	23.00	17.59	18.17	18.10	18.68	19.16
	12H	21.63	22.14	22.14	22.63	23.20	17.77	18.28	18.28	18.77	19.34
12H	4H	20.53	21.22	21.01	21.70	22.17	16.83	17.52	17.31	18.00	18.47
	6H	21.16	21.74	21.67	22.25	22.73	17.43	18.01	17.95	18.52	19.01
	8H	21.44	21.95	21.95	22.45	23.01	17.71	18.22	18.22	18.71	19.27