

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: P930986

Luminaire Tested: DFN2DS-SQ3F0-080DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930986
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-SQ3F0-080DS930-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

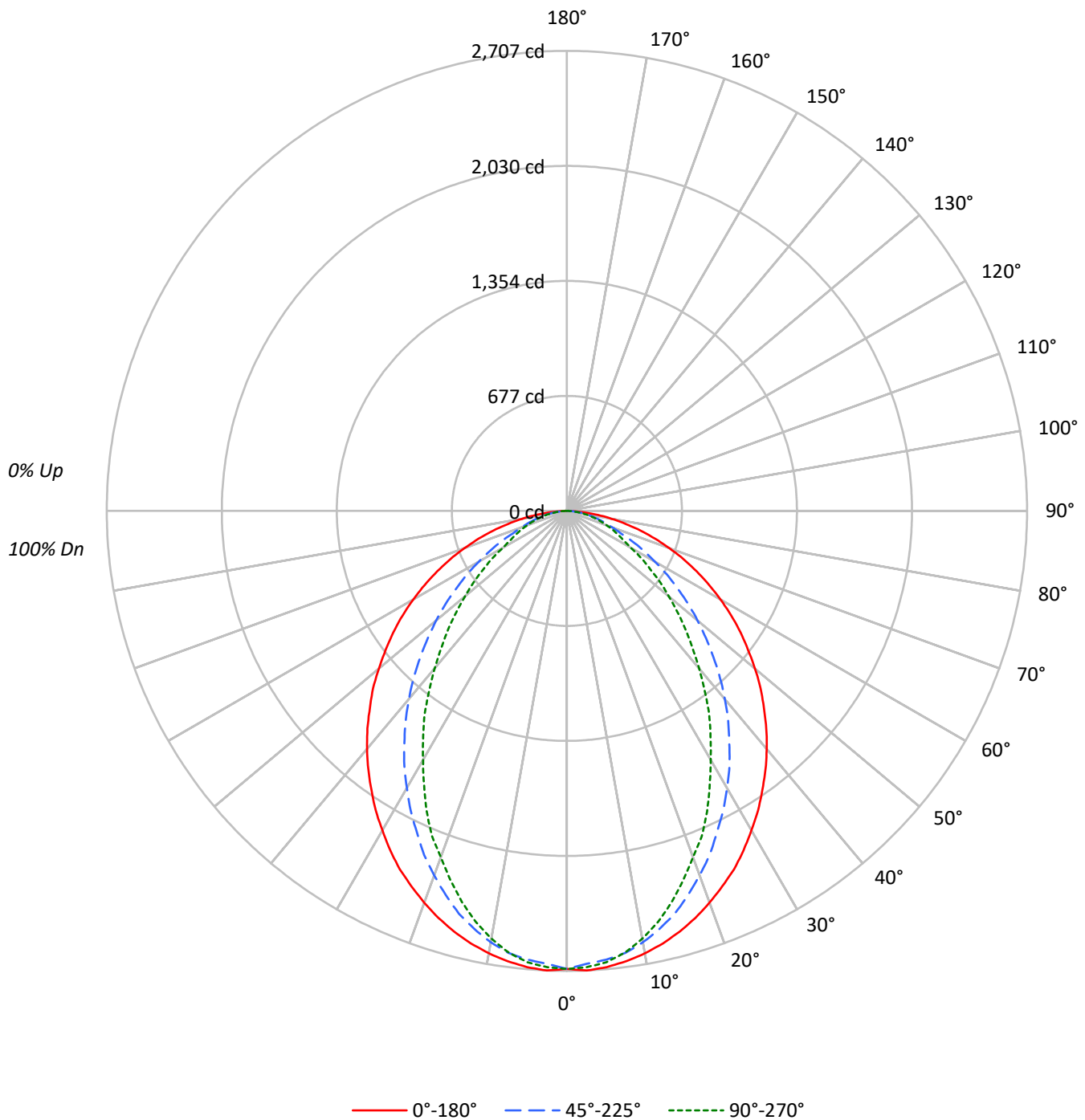
Lumens per Lamp: N/A
Luminaire Lumens: 5542.0 lumens
Efficiency: N/A
Efficacy: 67.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 82
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9952
Total Harmonic Distortion (THDi): 0.069
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°	3088	3088	3088
5°	3099	3049	3066
10°	3076	2999	2974
15°	3040	2910	2826
20°	2991	2783	2643
25°	2941	2639	2466
30°	2872	2491	2239
35°	2804	2330	2040
40°	2736	2163	1809
45°	2656	1976	1600
50°	2573	1787	1396
55°	2489	1583	1199
60°	2392	1369	995
65°	2281	1150	906
70°	2149	947	833
75°	1986	864	778
80°	1753	772	708
85°	1378	609	609

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2656 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.6	4.6
10°-20°	693.3	12.5
20°-30°	973.4	17.6
30°-40°	1061.0	19.1
40°-50°	975.2	17.6
50°-60°	765.9	13.8
60°-70°	498.5	9.0
70°-80°	256.6	4.6
80°-90°	65.5	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°	1919.2	34.6
0°-40°	2980.3	53.8
0°-60°	4721.4	85.2
0°-90°	5542.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5542.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2695	2695	2695	2695	2695	
5°	2695	2683	2651	2673	2666	256
15°	2563	2536	2453	2407	2383	722
25°	2326	2248	2088	1988	1951	1070
35°	2005	1880	1666	1512	1458	1255
45°	1639	1475	1219	1046	988	1266
55°	1246	1056	792	646	600	1113
65°	841	644	424	342	334	834
75°	449	278	195	178	176	475
85°	105	54	46	46	46	126
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2694.7	2694.7	2694.7	2694.7	2694.7
2.5°	2706.9	2694.7	2667.8	2692.4	2687.5
5°	2694.7	2682.6	2650.7	2672.7	2665.5
7.5°	2672.7	2658.2	2624.1	2633.7	2621.4
10°	2643.5	2626.4	2577.8	2570.3	2555.8
12.5°	2607.0	2585.0	2519.0	2504.5	2477.6
15°	2563.0	2536.1	2453.3	2407.0	2382.7
17.5°	2511.7	2472.7	2370.3	2316.7	2277.6
20°	2453.3	2404.4	2282.6	2221.8	2167.9
22.5°	2389.9	2333.8	2192.3	2109.5	2073.0
25°	2326.5	2248.4	2087.5	1987.6	1950.9
27.5°	2250.9	2167.9	1989.9	1875.3	1819.2
30°	2170.5	2077.6	1882.6	1758.4	1692.3
32.5°	2092.3	1980.1	1780.4	1633.9	1572.9
35°	2004.7	1880.2	1665.7	1512.1	1458.2
37.5°	1919.2	1785.0	1558.4	1389.9	1329.1
40°	1829.0	1682.8	1446.1	1272.9	1209.5
42.5°	1736.4	1580.4	1334.0	1153.5	1092.6
45°	1638.8	1475.3	1219.4	1046.1	987.6
47.5°	1546.2	1373.1	1109.7	936.4	882.8
50°	1443.7	1270.7	1002.4	833.9	782.9
52.5°	1343.6	1160.6	899.8	739.0	692.7
55°	1246.1	1055.9	792.5	646.3	600.0
57.5°	1146.2	951.1	697.6	561.0	521.8
60°	1043.7	848.7	597.4	473.2	434.2
62.5°	943.9	748.7	512.1	395.1	375.7
65°	841.4	643.7	424.3	341.6	334.0
67.5°	743.9	546.2	341.6	299.8	292.7
70°	641.4	451.3	282.8	258.4	248.7
72.5°	543.8	363.2	236.5	217.1	212.1
75°	448.7	277.9	195.1	178.0	175.7
77.5°	353.7	197.4	153.7	143.8	139.0
80°	265.7	141.6	117.0	107.3	107.3
82.5°	185.2	95.2	80.4	75.6	75.6
85°	104.8	53.5	46.3	46.3	46.3
87.5°	39.0	19.4	19.4	17.1	17.1
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	15.15	16.67	15.52	16.99	17.30	11.11	12.63	11.48	12.95	13.26
	3H	16.92	18.28	17.29	18.61	18.97	12.38	13.74	12.76	14.07	14.43
	4H	17.58	18.86	17.98	19.21	19.59	12.88	14.16	13.28	14.51	14.89
	6H	18.07	19.26	18.48	19.62	20.01	13.26	14.44	13.67	14.81	15.20
	8H	18.24	19.36	18.66	19.75	20.15	13.38	14.51	13.81	14.90	15.30
	12H	18.34	19.42	18.77	19.80	20.23	13.47	14.54	13.90	14.93	15.36
4H	2H	15.26	16.54	15.66	16.88	17.26	11.81	13.09	12.21	13.44	13.82
	3H	17.19	18.25	17.60	18.65	19.05	13.25	14.31	13.66	14.71	15.11
	4H	17.94	18.90	18.37	19.31	19.75	13.85	14.81	14.28	15.22	15.66
	6H	18.53	19.36	18.99	19.80	20.26	14.34	15.17	14.80	15.61	16.07
	8H	18.74	19.52	19.21	19.97	20.43	14.50	15.28	14.96	15.72	16.19
	12H	18.90	19.59	19.38	20.07	20.54	14.62	15.31	15.10	15.79	16.26
8H	4H	17.96	18.74	18.43	19.18	19.65	14.20	14.98	14.67	15.43	15.89
	6H	18.60	19.24	19.10	19.73	20.21	14.79	15.43	15.29	15.92	16.40
	8H	18.85	19.43	19.36	19.94	20.43	15.01	15.59	15.53	16.10	16.59
	12H	19.05	19.56	19.56	20.06	20.62	15.19	15.70	15.70	16.19	16.76
12H	4H	17.95	18.64	18.43	19.12	19.59	14.25	14.94	14.73	15.42	15.89
	6H	18.58	19.16	19.09	19.67	20.16	14.85	15.43	15.37	15.94	16.43
	8H	18.87	19.38	19.38	19.87	20.43	15.13	15.64	15.64	16.13	16.69