

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: P930890

Luminaire Tested: DFN2DS-SQ2F0-080DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930890
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-SQ2F0-080DS840-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

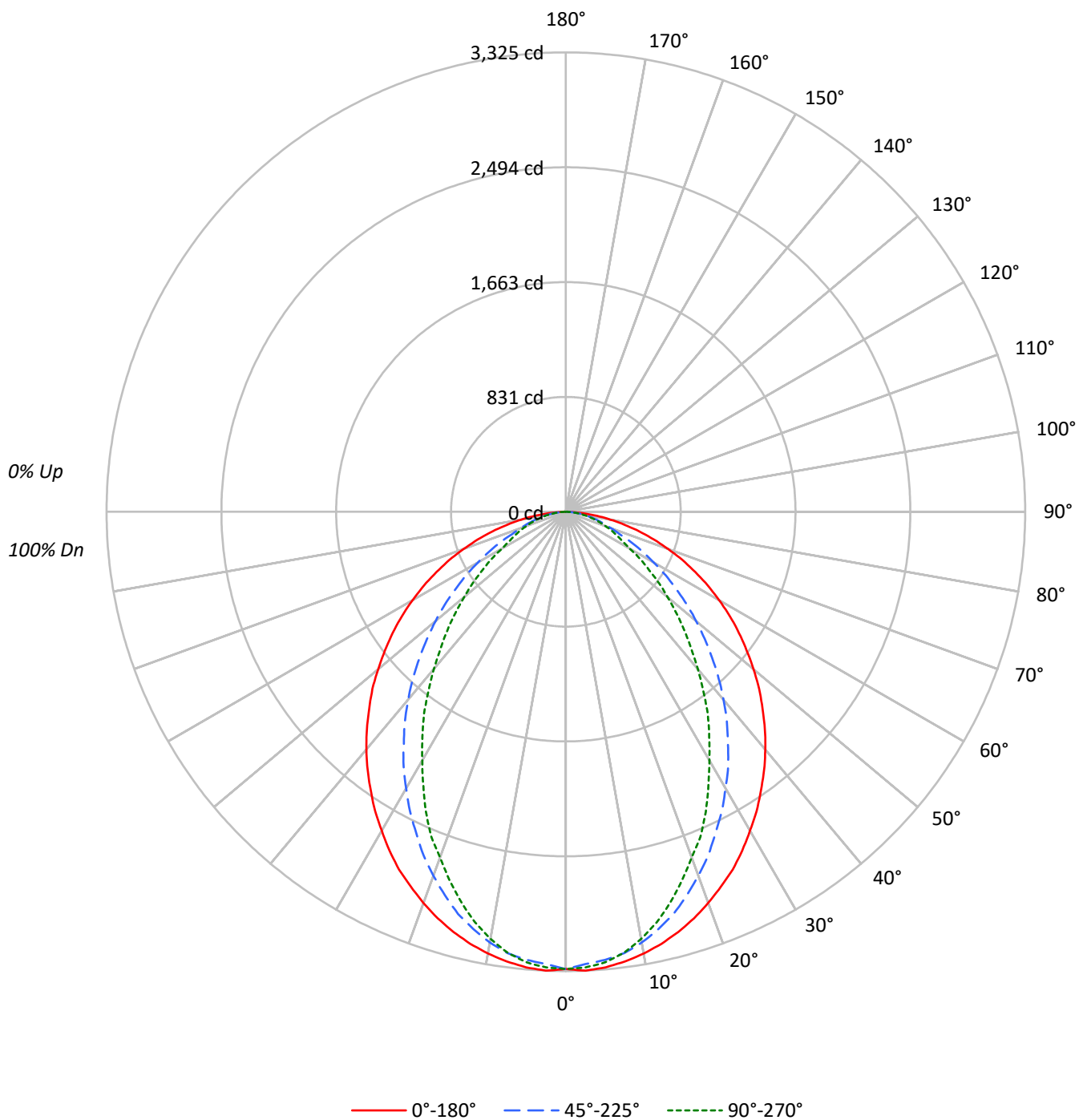
Lumens per Lamp: N/A
Luminaire Lumens: 6806.8 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

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
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°	7278	7278	7278
5°	7305	7186	7226
10°	7249	7069	7009
15°	7166	6859	6662
20°	7051	6560	6231
25°	6933	6221	5813
30°	6769	5871	5278
35°	6609	5492	4808
40°	6448	5098	4264
45°	6259	4657	3772
50°	6066	4211	3290
55°	5867	3732	2825
60°	5638	3227	2345
65°	5377	2711	2134
70°	5065	2233	1963
75°	4682	2036	1833
80°	4132	1818	1669
85°	3247	1436	1436

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6259 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.2	4.6
10°-20°	851.5	12.5
20°-30°	1195.5	17.6
30°-40°	1303.2	19.1
40°-50°	1197.8	17.6
50°-60°	940.7	13.8
60°-70°	612.3	9.0
70°-80°	315.2	4.6
80°-90°	80.5	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°	2357.2	34.6
0°-40°	3660.4	53.8
0°-60°	5798.9	85.2
0°-90°	6806.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6806.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3310	3310	3310	3310	3310	
5°	3310	3295	3256	3283	3274	314
15°	3148	3115	3013	2956	2926	887
25°	2858	2762	2564	2441	2396	1314
35°	2462	2309	2046	1857	1791	1541
45°	2013	1812	1498	1285	1213	1554
55°	1530	1297	973	794	737	1368
65°	1033	791	521	420	410	1025
75°	551	341	240	219	216	583
85°	129	66	57	57	57	154
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3309.7	3309.7	3309.7	3309.7	3309.7
2.5°	3324.6	3309.7	3276.7	3306.8	3300.8
5°	3309.7	3294.8	3255.7	3282.7	3273.8
7.5°	3282.7	3264.9	3222.9	3234.7	3219.7
10°	3246.7	3225.8	3166.1	3156.9	3139.0
12.5°	3202.0	3175.0	3093.9	3076.1	3043.0
15°	3147.9	3114.9	3013.2	2956.4	2926.4
17.5°	3085.0	3037.0	2911.2	2845.4	2797.4
20°	3013.2	2953.2	2803.5	2728.8	2662.7
22.5°	2935.3	2866.4	2692.6	2590.9	2546.0
25°	2857.5	2761.6	2563.9	2441.2	2396.1
27.5°	2764.7	2662.7	2444.0	2303.3	2234.3
30°	2665.9	2551.7	2312.2	2159.7	2078.6
32.5°	2569.9	2432.0	2186.7	2006.8	1931.8
35°	2462.2	2309.3	2045.8	1857.2	1791.0
37.5°	2357.3	2192.4	1914.0	1707.1	1632.4
40°	2246.4	2066.9	1776.1	1563.5	1485.6
42.5°	2132.6	1941.0	1638.4	1416.7	1341.9
45°	2012.8	1812.0	1497.7	1284.8	1213.0
47.5°	1899.1	1686.5	1363.0	1150.0	1084.3
50°	1773.2	1560.7	1231.1	1024.2	961.6
52.5°	1650.2	1425.5	1105.2	907.6	850.7
55°	1530.4	1296.9	973.4	793.8	736.9
57.5°	1407.8	1168.2	856.8	689.0	640.9
60°	1281.9	1042.3	733.7	581.2	533.2
62.5°	1159.3	919.6	628.9	485.3	461.5
65°	1033.4	790.6	521.1	419.5	410.2
67.5°	913.6	670.9	419.5	368.3	359.5
70°	787.8	554.3	347.3	317.4	305.4
72.5°	668.0	446.1	290.5	266.7	260.6
75°	551.1	341.3	239.6	218.6	215.8
77.5°	434.4	242.4	188.8	176.7	170.7
80°	326.3	173.9	143.6	131.8	131.8
82.5°	227.5	116.9	98.8	92.8	92.8
85°	128.7	65.8	56.9	56.9	56.9
87.5°	47.9	23.8	23.8	21.0	21.0
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	18.13	19.65	18.50	19.97	20.28	14.09	15.61	14.46	15.93	16.24
	3H	19.90	21.26	20.27	21.59	21.95	15.36	16.72	15.73	17.05	17.41
	4H	20.56	21.84	20.96	22.19	22.57	15.86	17.14	16.26	17.49	17.87
	6H	21.05	22.23	21.46	22.60	22.99	16.24	17.42	16.65	17.79	18.18
	8H	21.22	22.34	21.64	22.73	23.13	16.36	17.49	16.79	17.88	18.28
	12H	21.32	22.40	21.75	22.78	23.21	16.44	17.52	16.88	17.91	18.33
4H	2H	18.23	19.52	18.63	19.86	20.24	14.79	16.07	15.19	16.42	16.79
	3H	20.17	21.23	20.58	21.63	22.03	16.23	17.29	16.64	17.69	18.09
	4H	20.92	21.87	21.35	22.29	22.73	16.83	17.79	17.26	18.20	18.64
	6H	21.51	22.34	21.97	22.78	23.24	17.32	18.15	17.77	18.59	19.05
	8H	21.72	22.50	22.19	22.95	23.41	17.48	18.26	17.94	18.70	19.17
	12H	21.88	22.57	22.36	23.05	23.52	17.60	18.29	18.08	18.77	19.24
8H	4H	20.94	21.72	21.41	22.16	22.63	17.18	17.96	17.65	18.40	18.87
	6H	21.58	22.22	22.08	22.71	23.19	17.77	18.41	18.27	18.90	19.38
	8H	21.83	22.41	22.34	22.92	23.40	17.99	18.57	18.50	19.08	19.56
	12H	22.03	22.54	22.54	23.04	23.60	18.17	18.68	18.68	19.17	19.74
12H	4H	20.93	21.62	21.41	22.10	22.57	17.23	17.92	17.71	18.40	18.87
	6H	21.56	22.14	22.07	22.65	23.14	17.83	18.41	18.35	18.92	19.41
	8H	21.84	22.35	22.35	22.85	23.41	18.11	18.62	18.62	19.11	19.67