

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: P930854

Luminaire Tested: DFN2DS-SQ2F0-060DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930854
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-SQ2F0-060DS840-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

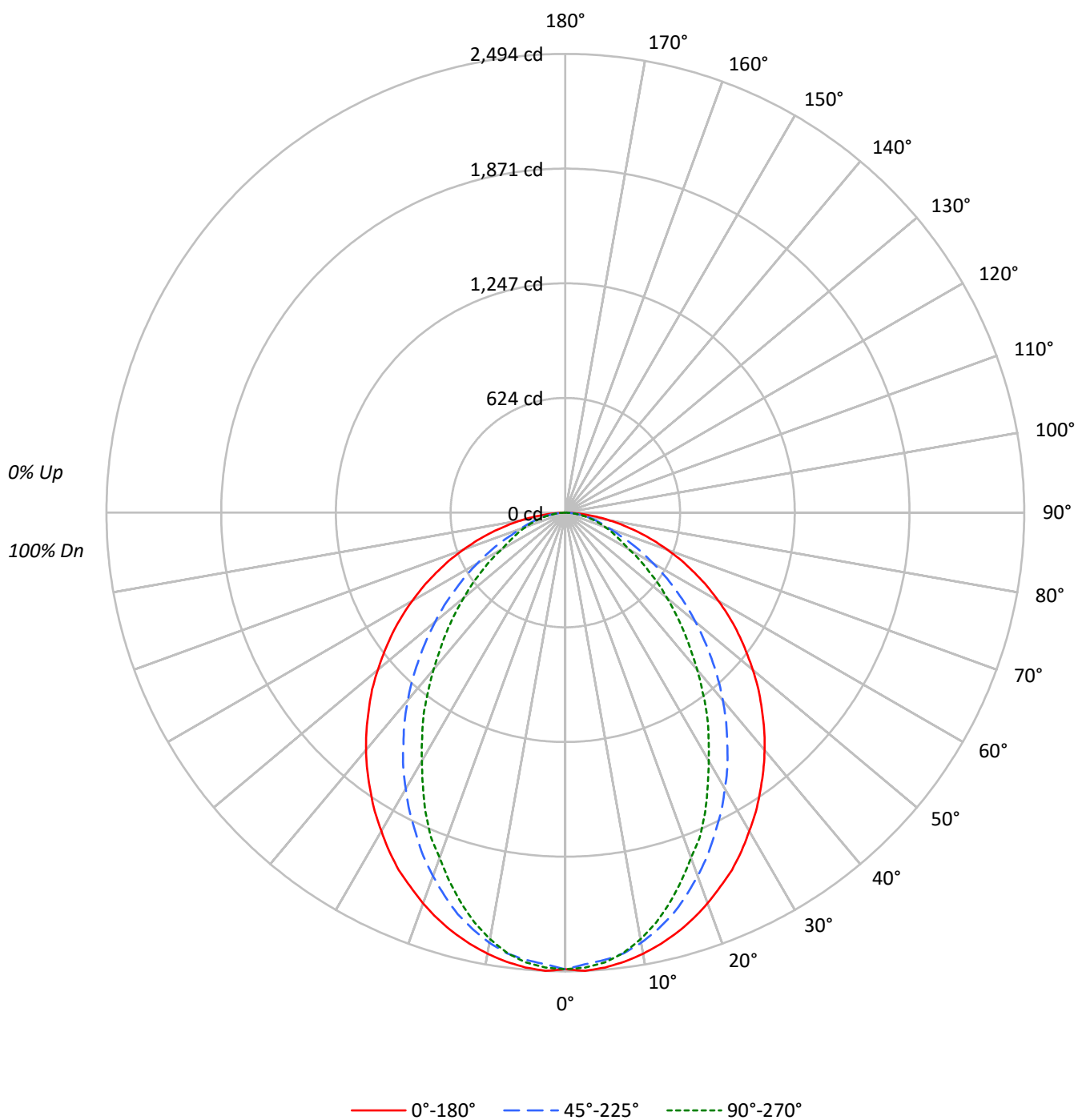
Lumens per Lamp: N/A
Luminaire Lumens: 5105.1 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 58.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
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°	5458	5458	5458
5°	5479	5390	5420
10°	5437	5302	5257
15°	5375	5145	4996
20°	5288	4920	4673
25°	5200	4665	4360
30°	5077	4403	3958
35°	4957	4119	3606
40°	4836	3823	3198
45°	4694	3493	2829
50°	4549	3158	2467
55°	4400	2799	2119
60°	4228	2420	1759
65°	4033	2034	1601
70°	3798	1675	1472
75°	3511	1527	1375
80°	3099	1364	1252
85°	2435	1075	1075

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4694 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.6	4.6
10°-20°	638.6	12.5
20°-30°	896.6	17.6
30°-40°	977.4	19.1
40°-50°	898.3	17.6
50°-60°	705.5	13.8
60°-70°	459.2	9.0
70°-80°	236.4	4.6
80°-90°	60.3	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°	1767.9	34.6
0°-40°	2745.3	53.8
0°-60°	4349.1	85.2
0°-90°	5105.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5105.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2482	2482	2482	2482	2482	
5°	2482	2471	2442	2462	2455	235
15°	2361	2336	2260	2217	2195	665
25°	2143	2071	1923	1831	1797	986
35°	1847	1732	1534	1393	1343	1156
45°	1510	1359	1123	964	910	1166
55°	1148	973	730	595	553	1026
65°	775	593	391	315	308	768
75°	413	256	180	164	162	437
85°	96	49	43	43	43	116
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2482.3	2482.3	2482.3	2482.3	2482.3
2.5°	2493.5	2482.3	2457.5	2480.1	2475.6
5°	2482.3	2471.1	2441.7	2462.1	2455.4
7.5°	2462.1	2448.6	2417.2	2426.0	2414.8
10°	2435.0	2419.3	2374.6	2367.7	2354.3
12.5°	2401.5	2381.2	2320.4	2307.1	2282.3
15°	2361.0	2336.1	2259.9	2217.2	2194.8
17.5°	2313.8	2277.8	2183.4	2134.0	2098.1
20°	2259.9	2214.8	2102.6	2046.5	1997.0
22.5°	2201.5	2149.7	2019.4	1943.1	1909.5
25°	2143.1	2071.2	1922.9	1830.9	1797.1
27.5°	2073.6	1997.0	1833.0	1727.4	1675.8
30°	1999.4	1913.8	1734.1	1619.7	1559.0
32.5°	1927.4	1824.0	1640.0	1505.1	1448.8
35°	1846.6	1732.0	1534.4	1392.8	1343.2
37.5°	1768.0	1644.2	1435.5	1280.4	1224.3
40°	1684.8	1550.1	1332.0	1172.6	1114.2
42.5°	1599.5	1455.8	1228.8	1062.5	1006.5
45°	1509.6	1359.0	1123.3	963.6	909.7
47.5°	1424.3	1264.9	1022.2	862.6	813.2
50°	1329.9	1170.5	923.3	768.2	721.2
52.5°	1237.6	1069.2	828.9	680.7	638.0
55°	1147.8	972.7	730.0	595.4	552.7
57.5°	1055.9	876.1	642.5	516.7	480.7
60°	961.5	781.8	550.3	435.9	399.9
62.5°	869.5	689.8	471.7	364.0	346.0
65°	775.1	593.0	390.9	314.6	307.7
67.5°	685.2	503.1	314.6	276.3	269.6
70°	590.8	415.6	260.5	238.1	229.0
72.5°	501.0	334.6	217.8	200.0	195.4
75°	413.3	256.0	179.7	164.0	161.9
77.5°	325.8	181.9	141.5	132.5	128.0
80°	244.7	130.3	107.7	98.9	98.9
82.5°	170.7	87.7	74.1	69.6	69.6
85°	96.5	49.3	42.6	42.6	42.6
87.5°	36.0	17.9	17.9	15.7	15.7
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	17.13	18.65	17.50	18.97	19.28	13.09	14.61	13.46	14.93	15.24
	3H	18.90	20.26	19.27	20.59	20.95	14.36	15.72	14.73	16.05	16.41
	4H	19.56	20.84	19.96	21.19	21.57	14.86	16.14	15.26	16.49	16.87
	6H	20.05	21.23	20.46	21.60	21.99	15.24	16.42	15.65	16.79	17.18
	8H	20.22	21.34	20.64	21.73	22.13	15.36	16.49	15.79	16.88	17.28
	12H	20.32	21.40	20.75	21.78	22.21	15.45	16.52	15.88	16.91	17.33
4H	2H	17.24	18.52	17.63	18.86	19.24	13.79	15.07	14.19	15.42	15.80
	3H	19.17	20.23	19.58	20.63	21.03	15.23	16.29	15.64	16.69	17.09
	4H	19.92	20.87	20.35	21.29	21.73	15.83	16.79	16.26	17.20	17.64
	6H	20.51	21.34	20.97	21.78	22.24	16.32	17.15	16.78	17.59	18.05
	8H	20.72	21.50	21.19	21.95	22.41	16.48	17.26	16.94	17.70	18.17
	12H	20.88	21.57	21.36	22.05	22.52	16.60	17.29	17.08	17.77	18.24
8H	4H	19.94	20.72	20.41	21.16	21.63	16.18	16.96	16.65	17.41	17.87
	6H	20.58	21.22	21.08	21.71	22.19	16.77	17.41	17.27	17.90	18.38
	8H	20.83	21.41	21.34	21.92	22.40	16.99	17.57	17.51	18.08	18.57
	12H	21.03	21.54	21.54	22.04	22.60	17.17	17.68	17.68	18.17	18.74
12H	4H	19.93	20.62	20.41	21.10	21.57	16.23	16.92	16.71	17.40	17.87
	6H	20.56	21.14	21.07	21.65	22.14	16.83	17.41	17.35	17.92	18.41
	8H	20.84	21.35	21.35	21.85	22.41	17.11	17.62	17.62	18.11	18.67