

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: P931376

Luminaire Tested: DFN2DS-TR3F0-060DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931376
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-TR3F0-060DS840-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

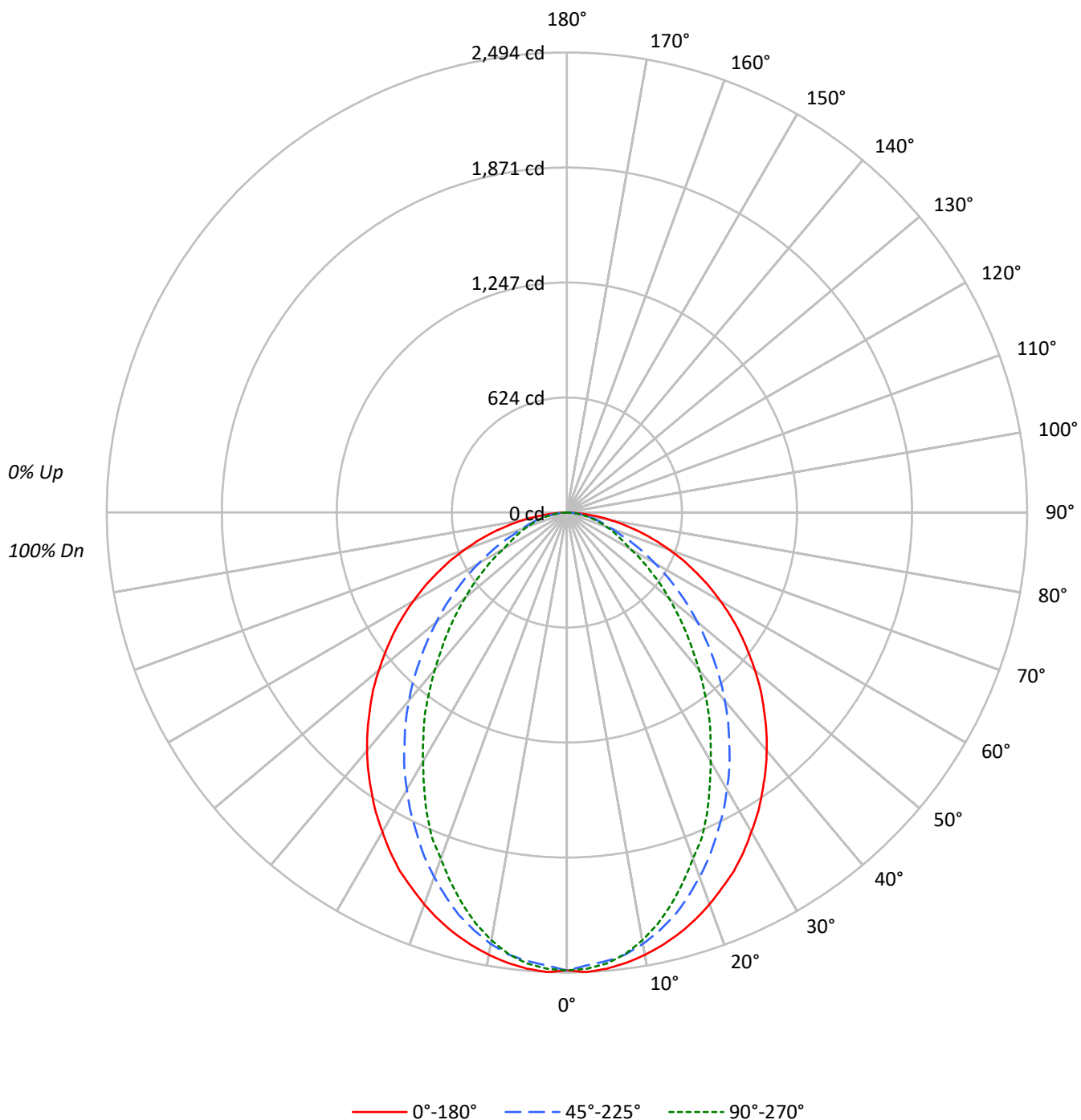
Lumens per Lamp: N/A
Luminaire Lumens: 5105.1 lumens
Efficiency: N/A
Efficacy: 82.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 61.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
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°	3093	3093	3093
5°	3105	3054	3071
10°	3081	3005	2979
15°	3046	2915	2831
20°	2997	2788	2648
25°	2947	2644	2471
30°	2877	2495	2243
35°	2809	2334	2043
40°	2741	2167	1812
45°	2660	1980	1603
50°	2578	1790	1398
55°	2494	1586	1201
60°	2396	1371	997
65°	2285	1153	907
70°	2153	949	834
75°	1990	865	779
80°	1756	773	710
85°	1380	609	609

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2660 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	15.16	16.68	15.52	16.99	17.31	11.12	12.64	11.48	12.95	13.27
	3H	16.92	18.29	17.30	18.62	18.98	12.38	13.75	12.76	14.08	14.44
	4H	17.59	18.87	17.99	19.22	19.60	12.89	14.17	13.29	14.52	14.89
	6H	18.08	19.26	18.49	19.63	20.02	13.27	14.45	13.68	14.82	15.21
	8H	18.24	19.37	18.67	19.76	20.16	13.39	14.52	13.82	14.91	15.31
	12H	18.35	19.43	18.78	19.81	20.24	13.47	14.55	13.90	14.93	15.36
4H	2H	15.26	16.54	15.66	16.89	17.27	11.81	13.09	12.21	13.44	13.82
	3H	17.20	18.26	17.61	18.66	19.06	13.26	14.32	13.67	14.72	15.12
	4H	17.94	18.90	18.38	19.32	19.76	13.86	14.81	14.29	15.23	15.67
	6H	18.54	19.37	18.99	19.81	20.27	14.35	15.18	14.80	15.62	16.08
	8H	18.75	19.53	19.21	19.97	20.44	14.51	15.28	14.97	15.73	16.20
	12H	18.90	19.60	19.39	20.08	20.55	14.62	15.32	15.11	15.80	16.27
8H	4H	17.97	18.75	18.43	19.19	19.66	14.21	14.99	14.67	15.43	15.90
	6H	18.61	19.25	19.10	19.74	20.22	14.80	15.44	15.29	15.93	16.41
	8H	18.86	19.43	19.37	19.94	20.43	15.02	15.59	15.53	16.10	16.59
	12H	19.06	19.57	19.57	20.06	20.63	15.20	15.71	15.71	16.20	16.76
12H	4H	17.95	18.65	18.44	19.13	19.60	14.25	14.95	14.74	15.43	15.90
	6H	18.59	19.16	19.10	19.67	20.16	14.86	15.44	15.37	15.95	16.44
	8H	18.87	19.38	19.38	19.87	20.44	15.13	15.64	15.64	16.14	16.70