

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: P930767

Luminaire Tested: DFN2DS-PN4F0-110DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930767
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN4F0-110DS927-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

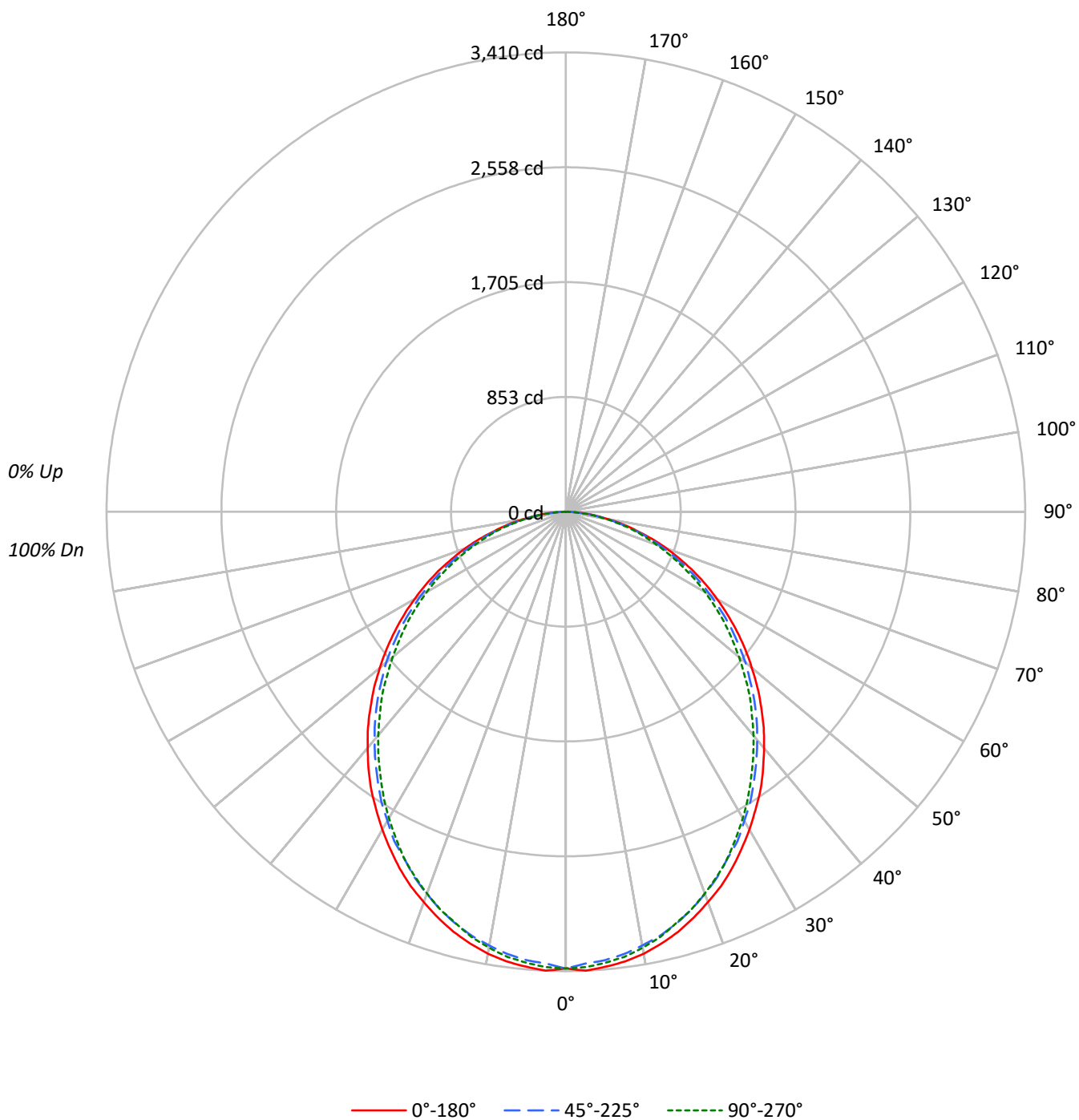
Lumens per Lamp: N/A
Luminaire Lumens: 8624.9 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 119
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 0.064
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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2474	2474	2474
5°	2484	2448	2463
10°	2469	2423	2435
15°	2439	2392	2390
20°	2395	2345	2342
25°	2352	2287	2287
30°	2297	2234	2215
35°	2245	2170	2138
40°	2181	2106	2066
45°	2117	2042	1992
50°	2047	1977	1906
55°	1975	1900	1830
60°	1894	1809	1742
65°	1808	1717	1639
70°	1698	1607	1531
75°	1544	1480	1444
80°	1371	1329	1261
85°	1118	1066	956

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2117 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	319.1	3.7
10°-20°	897.7	10.4
20°-30°	1319.3	15.3
30°-40°	1532.2	17.8
40°-50°	1530.4	17.7
50°-60°	1334.4	15.5
60°-70°	986.4	11.4
70°-80°	558.1	6.5
80°-90°	147.3	1.7
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°	2536.0	29.4
0°-40°	4068.3	47.2
0°-60°	6933.0	80.4
0°-90°	8624.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8624.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3390	3390	3390	3390	3390	
5°	3390	3377	3341	3367	3361	322
15°	3227	3208	3165	3178	3162	909
25°	2921	2895	2839	2846	2839	1344
35°	2520	2487	2435	2415	2399	1573
45°	2050	2028	1978	1943	1930	1582
55°	1552	1532	1493	1454	1438	1387
65°	1046	1027	994	965	949	1035
75°	547	541	525	505	512	584
85°	134	130	127	117	114	157
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3389.9	3389.9	3389.9	3389.9	3389.9
2.5°	3409.6	3393.3	3357.4	3389.9	3383.7
5°	3389.9	3377.1	3341.1	3367.0	3360.9
7.5°	3367.0	3347.7	3311.7	3338.0	3331.5
10°	3331.5	3308.6	3269.5	3295.4	3285.8
12.5°	3282.4	3263.0	3223.9	3240.2	3233.6
15°	3227.0	3207.6	3165.1	3178.2	3162.0
17.5°	3158.5	3139.2	3096.6	3112.9	3096.6
20°	3083.5	3064.1	3018.5	3028.1	3015.4
22.5°	3008.8	2979.3	2936.8	2936.8	2930.2
25°	2920.6	2894.7	2839.3	2845.6	2839.3
27.5°	2822.7	2799.9	2757.7	2748.0	2731.8
30°	2725.2	2698.9	2650.1	2640.4	2627.3
32.5°	2620.7	2601.4	2549.1	2529.4	2516.3
35°	2519.7	2487.3	2435.0	2415.3	2399.0
37.5°	2405.6	2376.2	2324.0	2301.2	2284.9
40°	2288.4	2262.1	2209.9	2180.9	2167.7
42.5°	2174.3	2148.0	2096.1	2063.2	2043.9
45°	2050.5	2027.6	1978.5	1942.9	1929.8
47.5°	1929.8	1907.0	1854.7	1818.7	1799.3
50°	1802.5	1786.3	1740.6	1695.0	1678.7
52.5°	1678.7	1655.8	1613.7	1577.7	1554.9
55°	1551.8	1532.0	1493.0	1453.9	1437.6
57.5°	1424.5	1408.3	1365.7	1326.6	1313.5
60°	1297.2	1284.5	1238.8	1202.8	1193.1
62.5°	1173.4	1150.6	1118.1	1085.6	1072.4
65°	1046.5	1026.7	994.3	964.9	948.7
67.5°	916.1	899.6	870.5	847.7	834.5
70°	795.4	782.3	752.9	730.1	717.2
72.5°	671.6	658.5	642.2	619.4	609.7
75°	547.4	541.3	524.6	505.3	511.9
77.5°	436.8	423.6	417.1	407.4	397.7
80°	326.1	322.7	316.1	306.4	299.9
82.5°	221.7	221.7	218.6	205.4	205.4
85°	133.5	130.4	127.3	117.2	114.1
87.5°	58.8	52.2	45.6	36.0	32.5
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	14.43	16.04	14.80	16.36	16.67	13.99	15.60	14.35	15.91	16.22
	3H	16.18	17.64	16.56	17.96	18.32	15.69	17.14	16.07	17.47	17.83
	4H	16.83	18.20	17.23	18.54	18.92	16.33	17.70	16.73	18.05	18.42
	6H	17.30	18.56	17.71	18.93	19.32	16.79	18.06	17.21	18.43	18.82
	8H	17.44	18.65	17.86	19.04	19.44	16.94	18.15	17.36	18.54	18.94
	12H	17.53	18.69	17.96	19.07	19.50	17.02	18.18	17.45	18.56	18.99
4H	2H	14.99	16.36	15.39	16.71	17.08	14.64	16.01	15.04	16.35	16.73
	3H	16.97	18.11	17.38	18.51	18.91	16.56	17.71	16.97	18.10	18.50
	4H	17.74	18.78	18.17	19.19	19.63	17.32	18.35	17.75	18.77	19.20
	6H	18.34	19.24	18.79	19.68	20.14	17.91	18.81	18.36	19.25	19.71
	8H	18.53	19.38	18.99	19.82	20.28	18.09	18.94	18.55	19.38	19.84
	12H	18.66	19.42	19.14	19.90	20.37	18.21	18.97	18.69	19.44	19.91
8H	4H	18.02	18.86	18.48	19.30	19.77	17.64	18.49	18.10	18.93	19.40
	6H	18.73	19.43	19.22	19.92	20.40	18.35	19.05	18.84	19.54	20.02
	8H	18.99	19.62	19.50	20.13	20.61	18.60	19.23	19.11	19.74	20.22
	12H	19.19	19.75	19.70	20.24	20.80	18.78	19.33	19.28	19.82	20.39
12H	4H	18.04	18.80	18.52	19.28	19.75	17.68	18.44	18.16	18.91	19.38
	6H	18.78	19.41	19.29	19.91	20.40	18.41	19.04	18.92	19.55	20.03
	8H	19.09	19.65	19.60	20.14	20.70	18.71	19.27	19.22	19.76	20.32