

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: P930627

Luminaire Tested: DFN2DS-PN3F0-090DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930627
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-PN3F0-090DS935-FLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

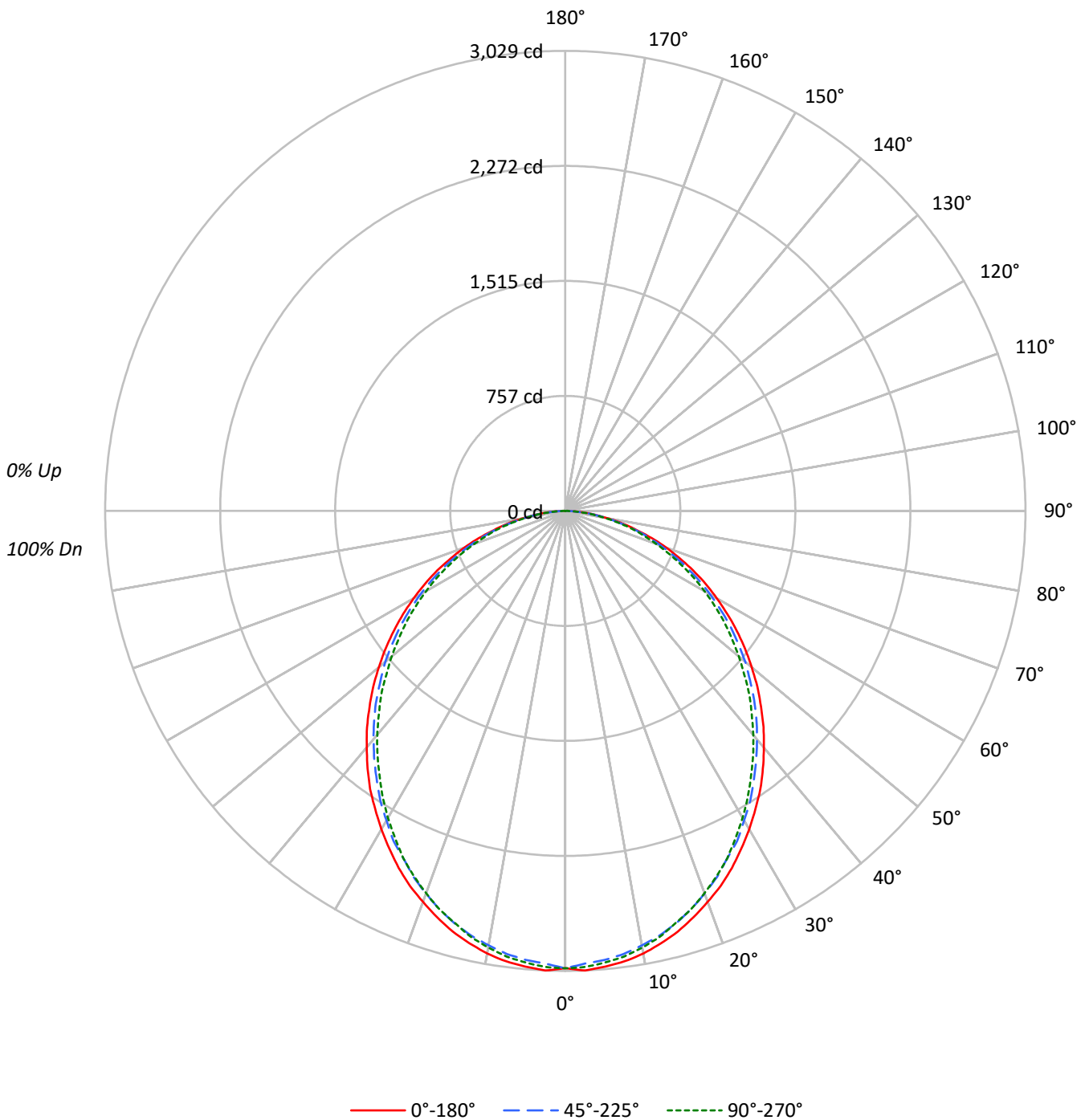
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7662.6 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
Input Voltage (V):
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	73	73	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	62	62	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	54	54	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	47	47	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	41	41	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	37	37	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	33	33	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3521	3521	3521
5°	3534	3483	3504
10°	3513	3448	3465
15°	3470	3403	3400
20°	3408	3336	3333
25°	3347	3254	3254
30°	3268	3178	3151
35°	3195	3087	3042
40°	3102	2996	2939
45°	3012	2906	2834
50°	2912	2812	2712
55°	2810	2703	2603
60°	2695	2573	2478
65°	2572	2443	2331
70°	2415	2286	2178
75°	2197	2105	2054
80°	1950	1890	1793
85°	1591	1517	1360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3012 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.5	3.7
10°-20°	797.5	10.4
20°-30°	1172.1	15.3
30°-40°	1361.3	17.8
40°-50°	1359.6	17.7
50°-60°	1185.5	15.5
60°-70°	876.4	11.4
70°-80°	495.8	6.5
80°-90°	130.9	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°	2253.1	29.4
0°-40°	3614.4	47.2
0°-60°	6159.5	80.4
0°-90°	7662.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7662.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3012	3012	3012	3012	3012	
5°	3012	3000	2968	2991	2986	286
15°	2867	2850	2812	2824	2809	807
25°	2595	2572	2523	2528	2523	1194
35°	2239	2210	2163	2146	2131	1398
45°	1822	1801	1758	1726	1714	1406
55°	1379	1361	1326	1292	1277	1233
65°	930	912	883	857	843	919
75°	486	481	466	449	455	519
85°	119	116	113	104	101	139
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3011.6	3011.6	3011.6	3011.6	3011.6
2.5°	3029.2	3014.7	2982.8	3011.6	3006.1
5°	3011.6	3000.3	2968.4	2991.4	2985.8
7.5°	2991.4	2974.2	2942.2	2965.6	2959.8
10°	2959.8	2939.5	2904.7	2927.8	2919.2
12.5°	2916.1	2898.9	2864.2	2878.6	2872.8
15°	2867.0	2849.8	2811.9	2823.6	2809.2
17.5°	2806.1	2788.9	2751.1	2765.6	2751.1
20°	2739.4	2722.2	2681.7	2690.3	2678.9
22.5°	2673.1	2647.0	2609.2	2609.2	2603.3
25°	2594.7	2571.7	2522.6	2528.1	2522.6
27.5°	2507.8	2487.5	2450.1	2441.5	2427.0
30°	2421.2	2397.8	2354.4	2345.8	2334.2
32.5°	2328.4	2311.2	2264.7	2247.3	2235.6
35°	2238.7	2209.8	2163.3	2145.9	2131.4
37.5°	2137.3	2111.1	2064.7	2044.5	2030.0
40°	2033.0	2009.7	1963.3	1937.5	1925.9
42.5°	1931.6	1908.3	1862.2	1833.1	1815.9
45°	1821.7	1801.4	1757.8	1726.1	1714.5
47.5°	1714.5	1694.2	1647.8	1615.9	1598.7
50°	1601.4	1587.0	1546.4	1505.9	1491.4
52.5°	1491.4	1471.1	1433.6	1401.7	1381.4
55°	1378.7	1361.1	1326.4	1291.7	1277.3
57.5°	1265.6	1251.1	1213.4	1178.6	1166.9
60°	1152.5	1141.1	1100.5	1068.6	1060.0
62.5°	1042.5	1022.2	993.3	964.5	952.8
65°	929.7	912.2	883.3	857.2	842.8
67.5°	813.9	799.2	773.3	753.1	741.4
70°	706.7	695.0	668.9	648.6	637.3
72.5°	596.7	585.0	570.5	550.3	541.7
75°	486.4	480.8	466.1	448.9	454.8
77.5°	388.0	376.4	370.6	362.0	353.4
80°	289.7	286.6	280.8	272.2	266.4
82.5°	196.9	196.9	194.2	182.5	182.5
85°	118.6	115.8	113.1	104.1	101.4
87.5°	52.2	46.4	40.6	32.0	28.9
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	15.66	17.27	16.02	17.58	17.89	15.21	16.82	15.58	17.14	17.45
	3H	17.41	18.86	17.78	19.19	19.55	16.91	18.37	17.29	18.70	19.06
	4H	18.05	19.42	18.45	19.77	20.14	17.56	18.93	17.96	19.27	19.65
	6H	18.52	19.79	18.93	20.15	20.55	18.02	19.29	18.43	19.65	20.04
	8H	18.66	19.87	19.09	20.26	20.66	18.16	19.37	18.59	19.76	20.16
	12H	18.75	19.91	19.18	20.30	20.72	18.24	19.40	18.67	19.78	20.21
4H	2H	16.22	17.58	16.61	17.93	18.31	15.86	17.23	16.26	17.58	17.96
	3H	18.19	19.34	18.60	19.74	20.14	17.78	18.93	18.19	19.33	19.73
	4H	18.97	20.00	19.40	20.42	20.85	18.54	19.58	18.98	19.99	20.43
	6H	19.56	20.47	20.02	20.91	21.37	19.13	20.04	19.59	20.48	20.93
	8H	19.75	20.60	20.21	21.04	21.51	19.32	20.16	19.78	20.60	21.07
	12H	19.89	20.65	20.37	21.12	21.59	19.43	20.19	19.91	20.67	21.14
8H	4H	19.24	20.09	19.70	20.53	21.00	18.87	19.71	19.33	20.16	20.62
	6H	19.95	20.66	20.45	21.15	21.62	19.57	20.28	20.07	20.77	21.24
	8H	20.21	20.84	20.72	21.35	21.84	19.82	20.45	20.33	20.96	21.45
	12H	20.41	20.97	20.92	21.46	22.02	20.00	20.56	20.51	21.05	21.61
12H	4H	19.27	20.03	19.75	20.50	20.97	18.90	19.66	19.38	20.14	20.61
	6H	20.00	20.63	20.51	21.14	21.63	19.63	20.26	20.14	20.77	21.26
	8H	20.31	20.87	20.82	21.36	21.92	19.94	20.49	20.44	20.98	21.55