

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: P930249

Luminaire Tested: DFN2DS-HX3F0-090DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930249
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-HX3F0-090DS935-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

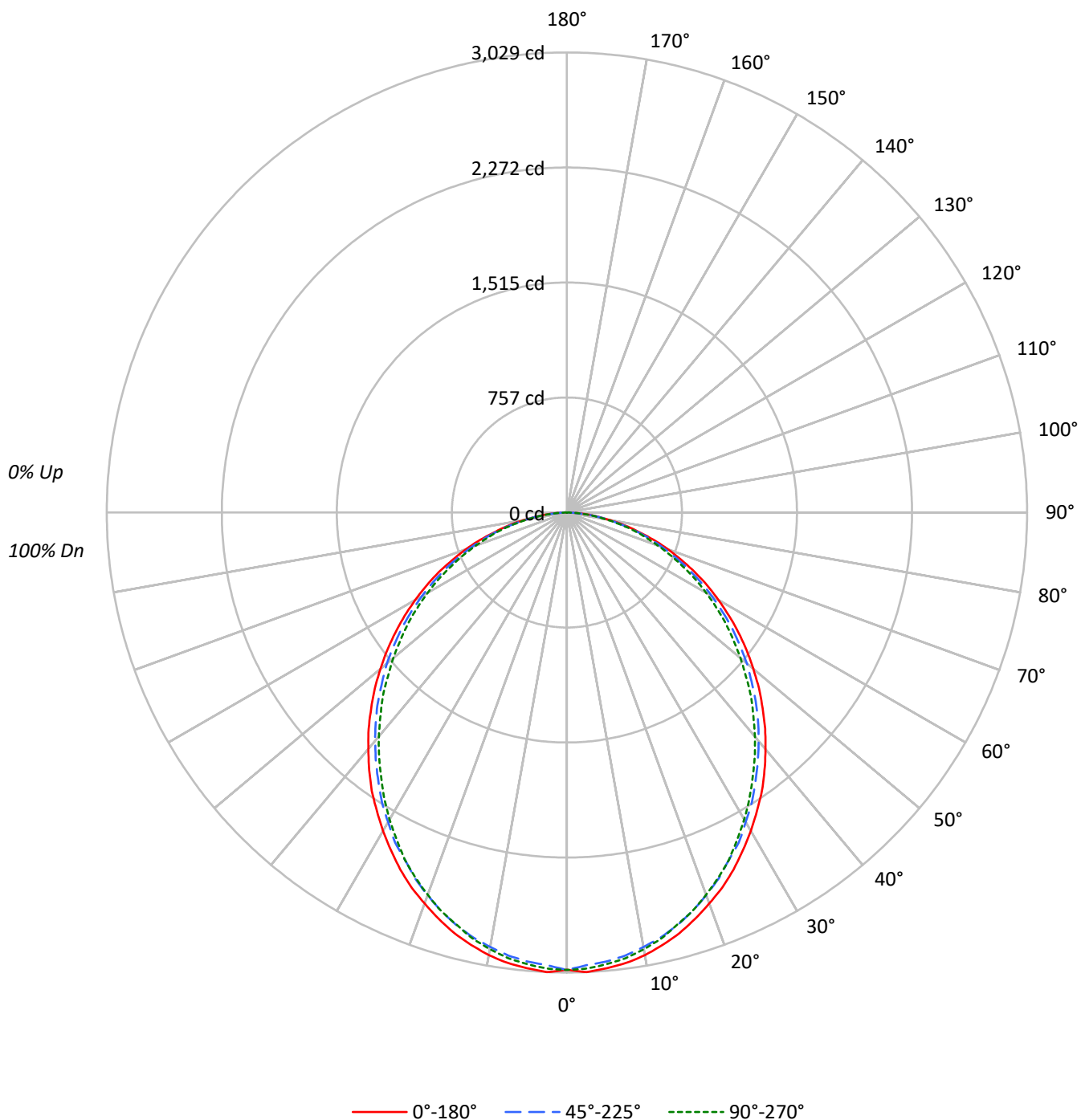
Lumens per Lamp: N/A
Luminaire Lumens: 7662.6 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 97.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
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				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°	3488	3488	3488
5°	3502	3452	3472
10°	3481	3417	3434
15°	3438	3372	3369
20°	3377	3306	3302
25°	3316	3224	3224
30°	3238	3149	3122
35°	3166	3059	3014
40°	3074	2969	2912
45°	2984	2880	2809
50°	2886	2787	2688
55°	2784	2679	2580
60°	2670	2550	2456
65°	2548	2421	2310
70°	2393	2265	2158
75°	2177	2086	2035
80°	1932	1873	1777
85°	1576	1503	1348

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2984 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	15.62	17.23	15.99	17.55	17.86	15.18	16.79	15.54	17.10	17.42
	3H	17.37	18.83	17.75	19.15	19.52	16.88	18.34	17.26	18.66	19.02
	4H	18.02	19.39	18.42	19.74	20.11	17.53	18.89	17.92	19.24	19.62
	6H	18.49	19.76	18.90	20.12	20.51	17.99	19.26	18.40	19.62	20.01
	8H	18.63	19.84	19.06	20.23	20.63	18.13	19.34	18.55	19.73	20.13
	12H	18.72	19.88	19.15	20.26	20.69	18.21	19.37	18.64	19.75	20.18
4H	2H	16.18	17.55	16.58	17.90	18.28	15.83	17.20	16.23	17.55	17.92
	3H	18.16	19.31	18.57	19.70	20.10	17.75	18.90	18.16	19.30	19.70
	4H	18.94	19.97	19.37	20.39	20.82	18.51	19.55	18.94	19.96	20.40
	6H	19.53	20.44	19.99	20.88	21.33	19.10	20.00	19.55	20.45	20.90
	8H	19.72	20.57	20.18	21.01	21.48	19.28	20.13	19.74	20.57	21.04
	12H	19.85	20.61	20.33	21.09	21.56	19.40	20.16	19.88	20.64	21.11
8H	4H	19.21	20.06	19.67	20.50	20.96	18.84	19.68	19.30	20.12	20.59
	6H	19.92	20.63	20.42	21.11	21.59	19.54	20.25	20.04	20.73	21.21
	8H	20.18	20.81	20.69	21.32	21.81	19.79	20.42	20.30	20.93	21.41
	12H	20.38	20.94	20.89	21.43	21.99	19.97	20.53	20.48	21.02	21.58
12H	4H	19.24	19.99	19.72	20.47	20.94	18.87	19.63	19.35	20.11	20.58
	6H	19.97	20.60	20.48	21.11	21.59	19.60	20.23	20.11	20.74	21.23
	8H	20.28	20.84	20.79	21.33	21.89	19.90	20.46	20.41	20.95	21.51