

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: P930583

Luminaire Tested: DFN2DS-PN3F0-070DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930583
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-PN3F0-070DS840-FLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

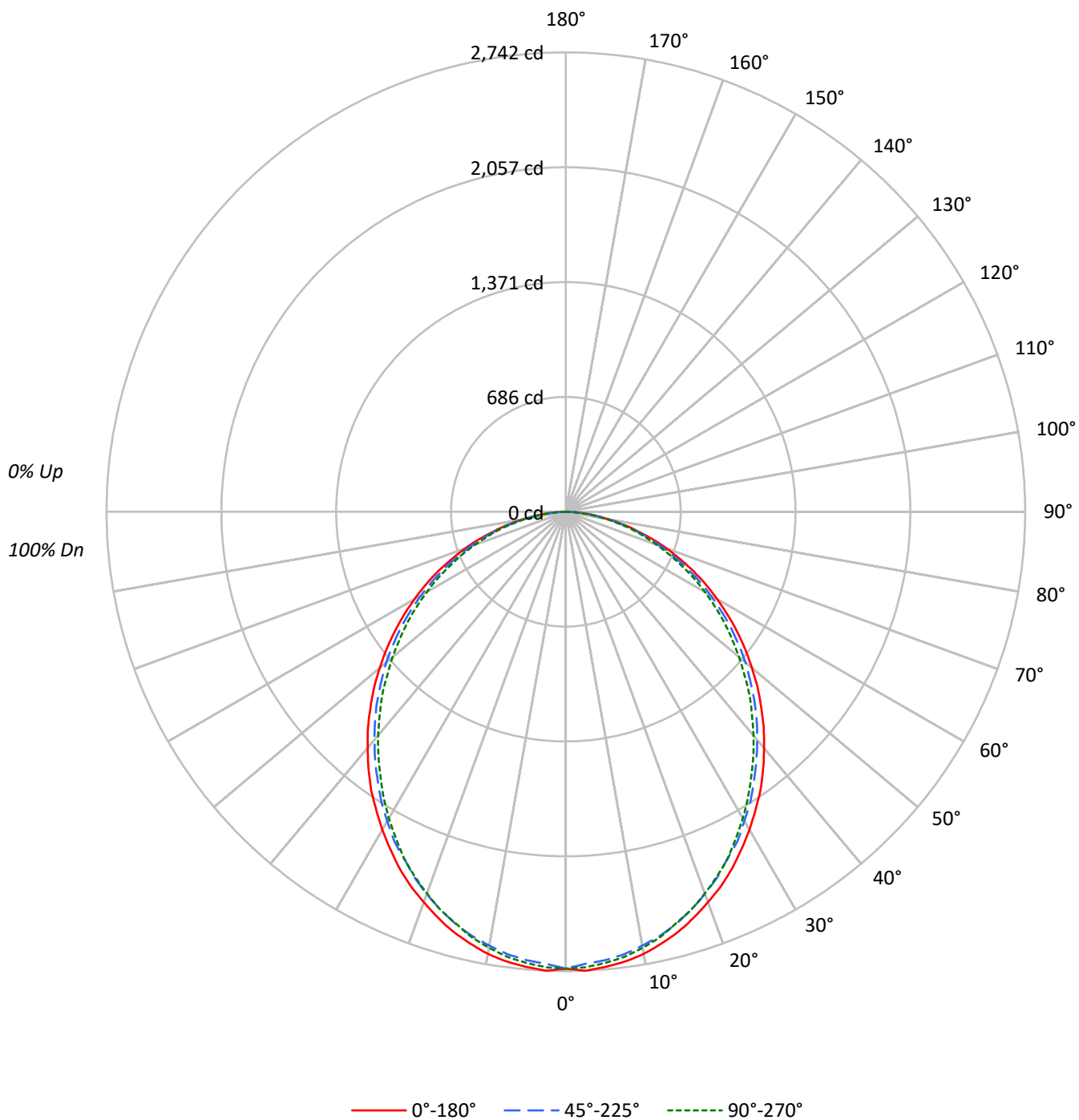
Lumens per Lamp: N/A
Luminaire Lumens: 6936.9 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 73.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.946
Total Harmonic Distortion (THDi): 0.132
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3187	3187	3187
5°	3199	3153	3172
10°	3181	3121	3137
15°	3141	3081	3078
20°	3085	3020	3017
25°	3030	2946	2946
30°	2959	2877	2852
35°	2892	2795	2754
40°	2809	2712	2660
45°	2726	2631	2566
50°	2636	2546	2455
55°	2543	2447	2357
60°	2439	2330	2244
65°	2328	2212	2110
70°	2186	2070	1972
75°	1989	1906	1859
80°	1766	1712	1623
85°	1441	1373	1231

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2726 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.6	3.7
10°-20°	722.0	10.4
20°-30°	1061.1	15.3
30°-40°	1232.4	17.8
40°-50°	1230.8	17.7
50°-60°	1073.3	15.5
60°-70°	793.4	11.4
70°-80°	448.9	6.5
80°-90°	118.5	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°	2039.7	29.4
0°-40°	3272.1	47.2
0°-60°	5576.2	80.4
0°-90°	6936.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6936.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2726	2726	2726	2726	2726	
5°	2726	2716	2687	2708	2703	259
15°	2596	2580	2546	2556	2543	731
25°	2349	2328	2284	2289	2284	1081
35°	2027	2000	1958	1943	1930	1266
45°	1649	1631	1591	1563	1552	1273
55°	1248	1232	1201	1169	1156	1116
65°	842	826	800	776	763	832
75°	440	435	422	406	412	470
85°	107	105	102	94	92	126
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2726.4	2726.4	2726.4	2726.4	2726.4
2.5°	2742.3	2729.2	2700.3	2726.4	2721.4
5°	2726.4	2716.2	2687.3	2708.1	2703.1
7.5°	2708.1	2692.5	2663.6	2684.8	2679.5
10°	2679.5	2661.1	2629.6	2650.5	2642.7
12.5°	2639.9	2624.4	2593.0	2606.0	2600.7
15°	2595.5	2579.9	2545.6	2556.3	2543.1
17.5°	2540.3	2524.8	2490.6	2503.7	2490.6
20°	2480.0	2464.5	2427.7	2435.5	2425.2
22.5°	2419.9	2396.3	2362.1	2362.1	2356.8
25°	2349.0	2328.1	2283.7	2288.7	2283.7
27.5°	2270.3	2251.9	2218.0	2210.2	2197.1
30°	2191.9	2170.7	2131.5	2123.7	2113.1
32.5°	2107.8	2092.3	2050.2	2034.4	2023.8
35°	2026.6	2000.5	1958.5	1942.6	1929.5
37.5°	1934.8	1911.2	1869.2	1850.8	1837.7
40°	1840.5	1819.4	1777.4	1754.1	1743.4
42.5°	1748.7	1727.6	1685.9	1659.5	1643.8
45°	1649.1	1630.8	1591.3	1562.7	1552.1
47.5°	1552.1	1533.7	1491.7	1462.8	1447.2
50°	1449.7	1436.6	1399.9	1363.3	1350.1
52.5°	1350.1	1331.8	1297.9	1269.0	1250.5
55°	1248.0	1232.2	1200.8	1169.4	1156.3
57.5°	1145.7	1132.6	1098.4	1067.0	1056.5
60°	1043.3	1033.0	996.4	967.5	959.7
62.5°	943.7	925.4	899.3	873.2	862.6
65°	841.7	825.8	799.7	776.1	763.0
67.5°	736.8	723.5	700.1	681.8	671.2
70°	639.7	629.2	605.5	587.2	576.9
72.5°	540.1	529.6	516.5	498.2	490.4
75°	440.3	435.3	421.9	406.4	411.7
77.5°	351.4	340.7	335.4	327.6	319.9
80°	262.3	259.6	254.3	246.4	241.1
82.5°	178.3	178.3	175.8	165.3	165.3
85°	107.4	104.9	102.4	94.3	91.8
87.5°	47.2	42.0	36.7	28.9	26.1
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	15.31	16.92	15.67	17.23	17.55	14.87	16.48	15.23	16.79	17.10
	3H	17.06	18.51	17.44	18.84	19.20	16.57	18.02	16.95	18.35	18.71
	4H	17.71	19.08	18.10	19.42	19.80	17.21	18.58	17.61	18.93	19.30
	6H	18.18	19.44	18.59	19.81	20.20	17.67	18.94	18.09	19.31	19.70
	8H	18.32	19.53	18.74	19.92	20.32	17.82	19.03	18.24	19.42	19.81
	12H	18.41	19.57	18.84	19.95	20.38	17.90	19.06	18.33	19.44	19.87
4H	2H	15.87	17.24	16.27	17.59	17.96	15.52	16.89	15.92	17.23	17.61
	3H	17.85	18.99	18.25	19.39	19.79	17.44	18.58	17.85	18.98	19.38
	4H	18.62	19.66	19.05	20.07	20.51	18.20	19.23	18.63	19.65	20.08
	6H	19.22	20.12	19.67	20.56	21.02	18.79	19.69	19.24	20.13	20.59
	8H	19.41	20.25	19.87	20.70	21.16	18.97	19.82	19.43	20.26	20.72
	12H	19.54	20.30	20.02	20.78	21.25	19.09	19.85	19.57	20.32	20.79
8H	4H	18.90	19.74	19.36	20.18	20.65	18.52	19.37	18.98	19.81	20.28
	6H	19.61	20.31	20.10	20.80	21.28	19.23	19.93	19.72	20.42	20.89
	8H	19.87	20.50	20.38	21.01	21.49	19.48	20.11	19.99	20.61	21.10
	12H	20.07	20.63	20.58	21.12	21.68	19.66	20.21	20.16	20.70	21.27
12H	4H	18.92	19.68	19.40	20.16	20.63	18.56	19.32	19.04	19.79	20.26
	6H	19.65	20.29	20.16	20.79	21.28	19.29	19.92	19.80	20.42	20.91
	8H	19.97	20.53	20.48	21.02	21.58	19.59	20.15	20.10	20.64	21.20