

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: P930690

Luminaire Tested: DFN2DS-PN4F0-070DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930690
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-PN4F0-070DS835-RLL
Description: 4 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

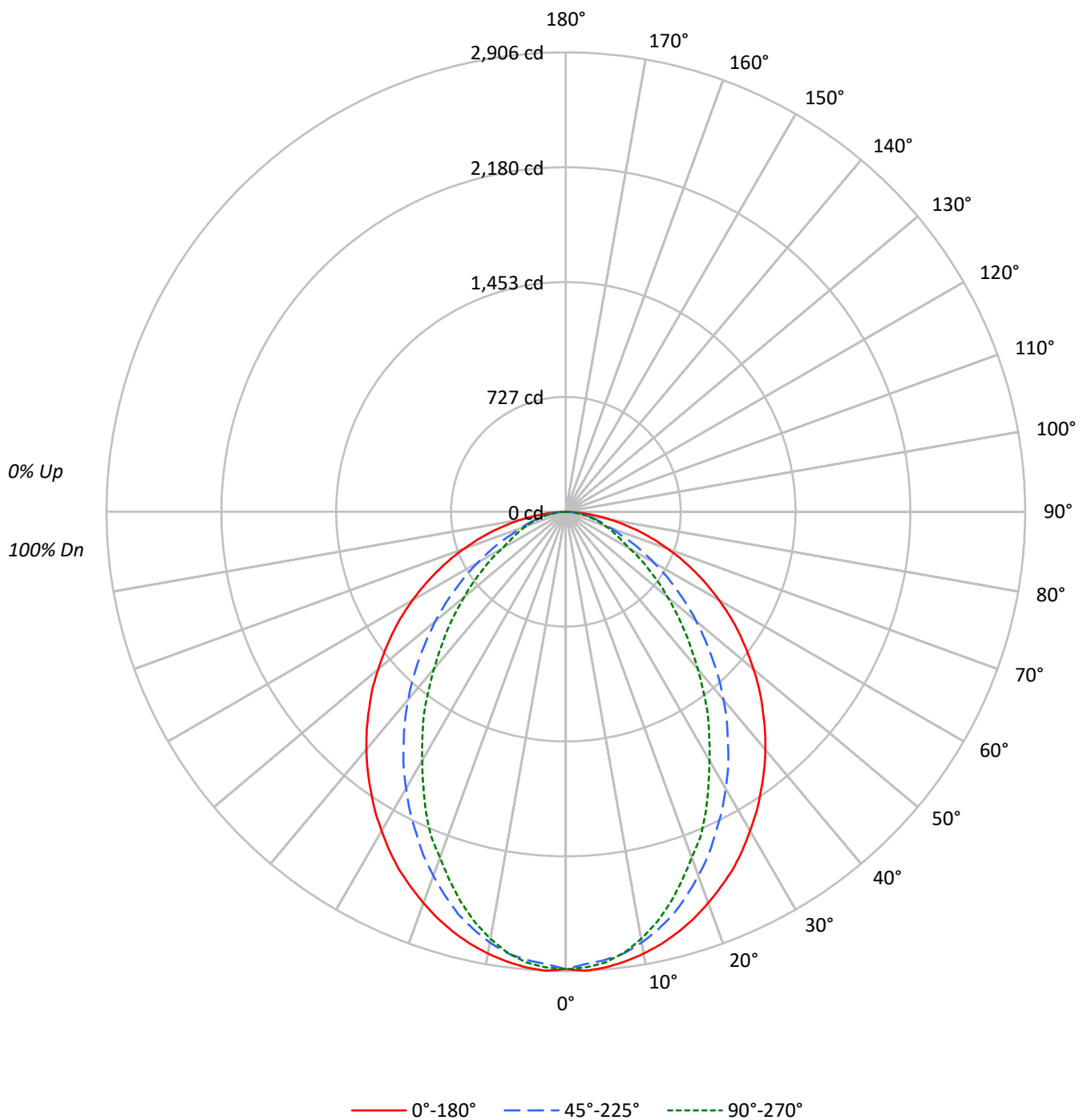
Lumens per Lamp: N/A
Luminaire Lumens: 5950.0 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
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°	2112	2112	2112
5°	2120	2085	2097
10°	2104	2051	2034
15°	2079	1990	1933
20°	2046	1904	1808
25°	2012	1805	1687
30°	1964	1704	1532
35°	1918	1594	1395
40°	1871	1479	1237
45°	1816	1352	1095
50°	1760	1222	955
55°	1703	1083	820
60°	1636	936	680
65°	1560	787	619
70°	1470	648	570
75°	1359	591	532
80°	1199	528	485
85°	942	416	416

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1816 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.1	4.6
10°-20°	744.3	12.5
20°-30°	1045.0	17.6
30°-40°	1139.2	19.1
40°-50°	1047.0	17.6
50°-60°	822.3	13.8
60°-70°	535.2	9.0
70°-80°	275.5	4.6
80°-90°	70.3	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°	2060.5	34.6
0°-40°	3199.7	53.8
0°-60°	5068.9	85.2
0°-90°	5950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2893	2893	2893	2893	2893	
5°	2893	2880	2846	2870	2862	274
15°	2752	2723	2634	2584	2558	775
25°	2498	2414	2241	2134	2094	1149
35°	2152	2019	1788	1623	1566	1347
45°	1760	1584	1309	1123	1060	1359
55°	1338	1134	851	694	644	1195
65°	903	691	456	367	359	896
75°	482	298	209	191	189	509
85°	112	58	50	50	50	135
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2893.1	2893.1	2893.1	2893.1	2893.1
2.5°	2906.1	2893.1	2864.2	2890.6	2885.3
5°	2893.1	2880.0	2845.9	2869.5	2861.7
7.5°	2869.5	2853.9	2817.3	2827.5	2814.5
10°	2838.1	2819.8	2767.5	2759.5	2743.9
12.5°	2798.9	2775.3	2704.5	2688.9	2660.0
15°	2751.7	2722.8	2633.9	2584.2	2558.1
17.5°	2696.7	2654.8	2544.8	2487.2	2445.3
20°	2633.9	2581.4	2450.6	2385.3	2327.5
22.5°	2565.9	2505.6	2353.6	2264.7	2225.6
25°	2497.8	2413.9	2241.1	2133.9	2094.5
27.5°	2416.7	2327.5	2136.4	2013.4	1953.1
30°	2330.3	2230.6	2021.1	1887.8	1817.0
32.5°	2246.4	2125.9	1911.4	1754.2	1688.6
35°	2152.2	2018.6	1788.4	1623.4	1565.6
37.5°	2060.6	1916.4	1673.1	1492.2	1427.0
40°	1963.6	1806.7	1552.5	1366.7	1298.6
42.5°	1864.2	1696.7	1432.2	1238.3	1173.1
45°	1759.5	1583.9	1309.2	1123.1	1060.3
47.5°	1660.0	1474.2	1191.4	1005.3	947.8
50°	1550.0	1364.2	1076.1	895.3	840.6
52.5°	1442.5	1246.1	966.1	793.3	743.6
55°	1337.8	1133.6	850.8	693.9	644.2
57.5°	1230.6	1021.1	748.9	602.2	560.3
60°	1120.6	911.1	641.4	508.1	466.1
62.5°	1013.3	803.9	549.7	424.2	403.3
65°	903.3	691.1	455.6	366.7	358.6
67.5°	798.6	586.4	366.7	321.9	314.2
70°	688.6	484.4	303.6	277.5	266.9
72.5°	583.9	390.0	253.9	233.1	227.8
75°	481.7	298.3	209.4	191.1	188.6
77.5°	379.7	211.9	165.0	154.4	149.2
80°	285.3	151.9	125.6	115.3	115.3
82.5°	198.9	102.2	86.4	81.1	81.1
85°	112.5	57.5	49.7	49.7	49.7
87.5°	41.9	20.8	20.8	18.3	18.3
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	13.83	15.35	14.20	15.67	15.98	9.79	11.31	10.16	11.63	11.94
	3H	15.60	16.96	15.97	17.29	17.65	11.06	12.42	11.44	12.75	13.11
	4H	16.26	17.54	16.66	17.89	18.27	11.56	12.84	11.96	13.19	13.57
	6H	16.75	17.94	17.16	18.30	18.69	11.94	13.12	12.35	13.49	13.88
	8H	16.92	18.04	17.34	18.43	18.83	12.06	13.19	12.49	13.58	13.98
	12H	17.02	18.10	17.45	18.48	18.91	12.15	13.22	12.58	13.61	14.04
4H	2H	13.94	15.22	14.34	15.57	15.94	10.49	11.77	10.89	12.12	12.50
	3H	15.87	16.93	16.28	17.33	17.73	11.93	12.99	12.34	13.39	13.79
	4H	16.62	17.58	17.05	17.99	18.43	12.53	13.49	12.96	13.90	14.34
	6H	17.21	18.04	17.67	18.48	18.94	13.02	13.85	13.48	14.29	14.75
	8H	17.42	18.20	17.89	18.65	19.11	13.18	13.96	13.64	14.40	14.87
	12H	17.58	18.27	18.06	18.75	19.22	13.30	13.99	13.78	14.47	14.94
8H	4H	16.64	17.42	17.11	17.86	18.33	12.88	13.66	13.35	14.11	14.57
	6H	17.28	17.92	17.78	18.41	18.89	13.47	14.11	13.97	14.60	15.08
	8H	17.53	18.11	18.04	18.62	19.10	13.69	14.27	14.21	14.78	15.27
	12H	17.73	18.24	18.24	18.74	19.30	13.87	14.38	14.38	14.87	15.44
12H	4H	16.63	17.32	17.11	17.80	18.27	12.93	13.62	13.41	14.10	14.57
	6H	17.26	17.84	17.77	18.35	18.84	13.53	14.11	14.05	14.62	15.11
	8H	17.55	18.06	18.06	18.55	19.11	13.81	14.32	14.32	14.81	15.37