

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: P930688

Luminaire Tested: DFN2DS-PN4F0-070DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930688
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-PN4F0-070DS830-RLL
Description: 4 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

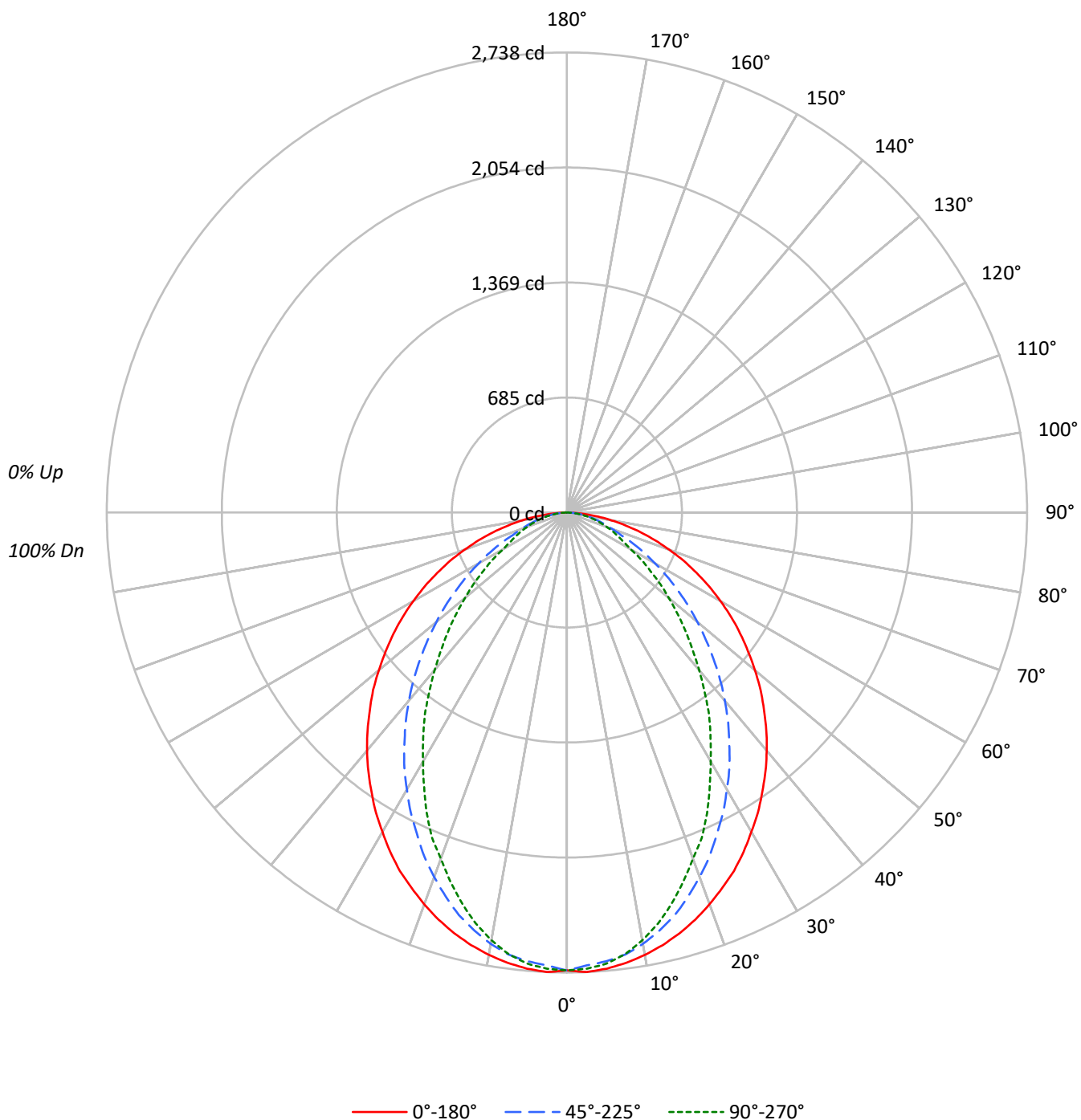
Lumens per Lamp: N/A
Luminaire Lumens: 5604.9 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

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°	1989	1989	1989
5°	1997	1964	1975
10°	1982	1932	1916
15°	1959	1875	1821
20°	1927	1793	1703
25°	1895	1700	1589
30°	1850	1605	1443
35°	1807	1501	1314
40°	1763	1394	1166
45°	1711	1273	1031
50°	1658	1151	899
55°	1604	1020	772
60°	1541	882	641
65°	1470	741	583
70°	1384	610	537
75°	1280	556	501
80°	1130	497	457
85°	888	392	392

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1711 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	255.4	4.6
10°-20°	701.2	12.5
20°-30°	984.4	17.6
30°-40°	1073.1	19.1
40°-50°	986.3	17.6
50°-60°	774.6	13.8
60°-70°	504.2	9.0
70°-80°	259.5	4.6
80°-90°	66.2	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°	1941.0	34.6
0°-40°	3014.1	53.8
0°-60°	4775.0	85.2
0°-90°	5604.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5604.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2725	2725	2725	2725	2725	
5°	2725	2713	2681	2703	2696	258
15°	2592	2565	2481	2434	2410	730
25°	2353	2274	2111	2010	1973	1082
35°	2027	1902	1685	1529	1475	1269
45°	1657	1492	1233	1058	999	1280
55°	1260	1068	802	654	607	1126
65°	851	651	429	345	338	844
75°	454	281	197	180	178	480
85°	106	54	47	47	47	127
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2725.3	2725.3	2725.3	2725.3	2725.3
2.5°	2737.5	2725.3	2698.1	2722.9	2718.0
5°	2725.3	2713.0	2680.8	2703.1	2695.7
7.5°	2703.1	2688.4	2653.9	2663.5	2651.3
10°	2673.5	2656.3	2607.0	2599.4	2584.8
12.5°	2636.6	2614.3	2547.6	2532.9	2505.7
15°	2592.1	2564.9	2481.1	2434.3	2409.7
17.5°	2540.3	2500.8	2397.2	2342.9	2303.5
20°	2481.1	2431.7	2308.5	2247.0	2192.5
22.5°	2417.1	2360.3	2217.1	2133.3	2096.5
25°	2352.9	2273.9	2111.1	2010.1	1973.0
27.5°	2276.5	2192.5	2012.5	1896.6	1839.8
30°	2195.1	2101.2	1903.9	1778.3	1711.6
32.5°	2116.1	2002.6	1800.5	1652.5	1590.7
35°	2027.4	1901.5	1684.7	1529.2	1474.8
37.5°	1941.1	1805.2	1576.1	1405.7	1344.2
40°	1849.7	1701.9	1462.5	1287.4	1223.3
42.5°	1756.1	1598.3	1349.1	1166.5	1105.1
45°	1657.4	1492.0	1233.3	1058.0	998.8
47.5°	1563.7	1388.7	1122.3	947.0	892.8
50°	1460.1	1285.1	1013.7	843.4	791.8
52.5°	1358.8	1173.8	910.1	747.3	700.5
55°	1260.2	1067.9	801.5	653.7	606.8
57.5°	1159.2	961.9	705.5	567.3	527.8
60°	1055.6	858.3	604.2	478.6	439.1
62.5°	954.5	757.3	517.8	399.6	379.9
65°	850.9	651.0	429.2	345.4	337.8
67.5°	752.3	552.4	345.4	303.2	296.0
70°	648.7	456.3	286.0	261.4	251.4
72.5°	550.0	367.4	239.2	219.6	214.6
75°	453.8	281.0	197.3	180.0	177.7
77.5°	357.7	199.6	155.4	145.4	140.5
80°	268.8	143.1	118.3	108.6	108.6
82.5°	187.4	96.3	81.4	76.4	76.4
85°	106.0	54.2	46.8	46.8	46.8
87.5°	39.5	19.6	19.6	17.2	17.2
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	13.62	15.15	13.99	15.46	15.77	9.59	11.11	9.95	11.42	11.73
	3H	15.39	16.75	15.77	17.08	17.44	10.85	12.22	11.23	12.54	12.90
	4H	16.06	17.34	16.46	17.69	18.06	11.35	12.63	11.75	12.98	13.36
	6H	16.54	17.73	16.96	18.09	18.49	11.73	12.92	12.14	13.28	13.67
	8H	16.71	17.84	17.14	18.23	18.63	11.86	12.98	12.28	13.37	13.77
	12H	16.81	17.89	17.24	18.27	18.70	11.94	13.02	12.37	13.40	13.83
4H	2H	13.73	15.01	14.13	15.36	15.74	10.28	11.56	10.68	11.91	12.29
	3H	15.66	16.72	16.07	17.12	17.53	11.72	12.79	12.13	13.19	13.59
	4H	16.41	17.37	16.84	17.78	18.22	12.32	13.28	12.76	13.70	14.13
	6H	17.00	17.83	17.46	18.28	18.74	12.81	13.64	13.27	14.09	14.55
	8H	17.22	17.99	17.68	18.44	18.91	12.97	13.75	13.44	14.19	14.66
	12H	17.37	18.07	17.85	18.54	19.01	13.09	13.78	13.57	14.26	14.73
8H	4H	16.44	17.21	16.90	17.66	18.12	12.68	13.45	13.14	13.90	14.37
	6H	17.07	17.72	17.57	18.21	18.68	13.26	13.91	13.76	14.40	14.87
	8H	17.32	17.90	17.84	18.41	18.90	13.48	14.06	14.00	14.57	15.06
	12H	17.53	18.04	18.04	18.53	19.09	13.66	14.17	14.17	14.67	15.23
12H	4H	16.42	17.11	16.90	17.59	18.06	12.72	13.41	13.20	13.89	14.36
	6H	17.05	17.63	17.57	18.14	18.63	13.33	13.90	13.84	14.41	14.90
	8H	17.34	17.85	17.85	18.34	18.90	13.60	14.11	14.11	14.60	15.17