

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: P930726

Luminaire Tested: DFN2DS-PN4F0-090DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930726
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-PN4F0-090DS835-RLL
Description: 4 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

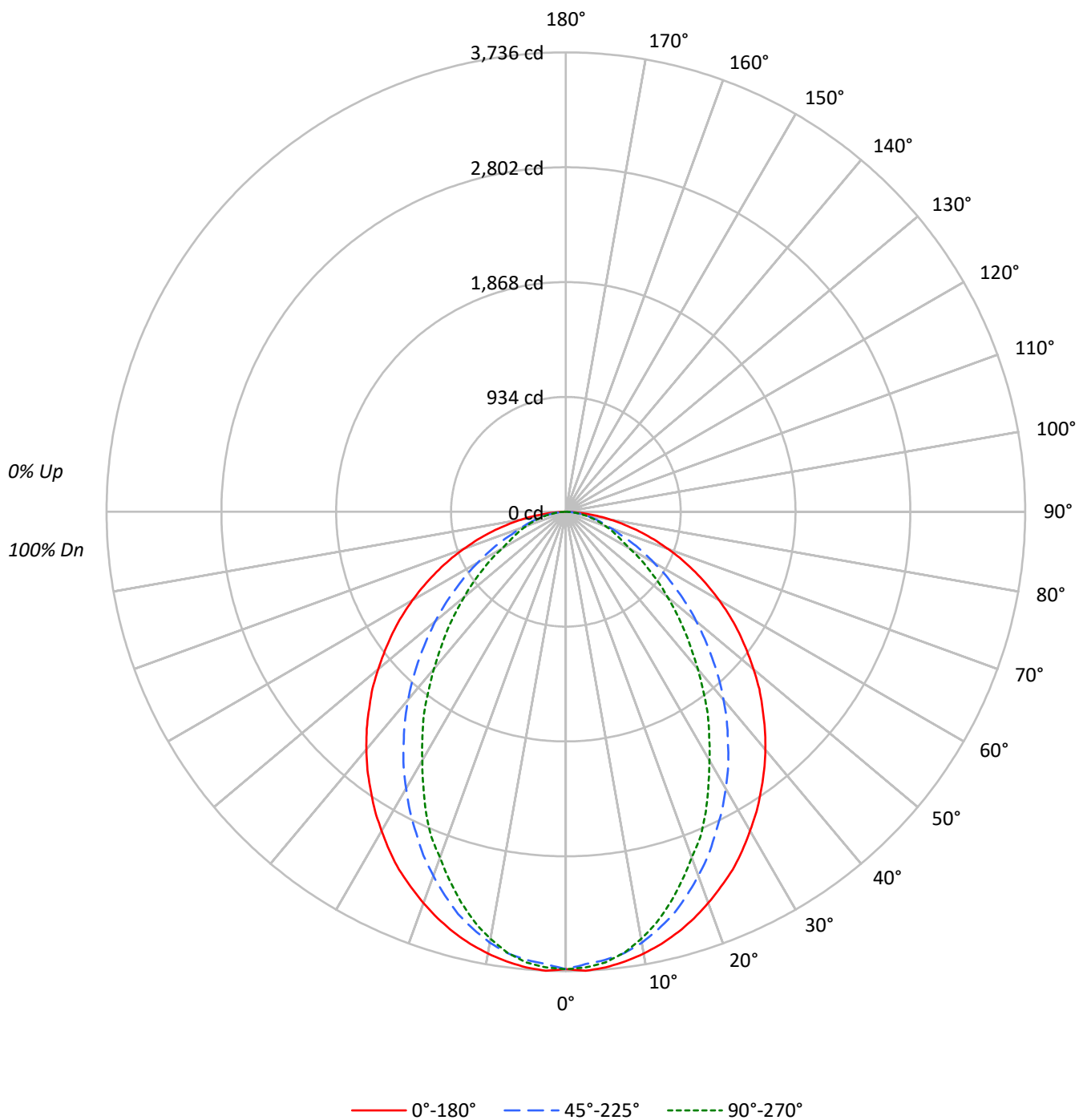
Lumens per Lamp: N/A
Luminaire Lumens: 7650.0 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 93.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
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°	2715	2715	2715
5°	2726	2681	2696
10°	2705	2637	2615
15°	2674	2559	2486
20°	2631	2447	2325
25°	2587	2321	2169
30°	2525	2190	1969
35°	2466	2049	1794
40°	2406	1902	1591
45°	2335	1738	1407
50°	2263	1571	1227
55°	2189	1392	1054
60°	2103	1204	875
65°	2006	1012	796
70°	1890	833	732
75°	1747	760	684
80°	1542	678	623
85°	1211	535	535

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2335 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.6	4.6
10°-20°	957.0	12.5
20°-30°	1343.6	17.6
30°-40°	1464.6	19.1
40°-50°	1346.2	17.6
50°-60°	1057.2	13.8
60°-70°	688.1	9.0
70°-80°	354.2	4.6
80°-90°	90.4	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°	2649.2	34.6
0°-40°	4113.9	53.8
0°-60°	6517.2	85.2
0°-90°	7650.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7650.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3720	3720	3720	3720	3720	
5°	3720	3703	3659	3689	3679	353
15°	3538	3501	3386	3322	3289	997
25°	3212	3104	2882	2744	2693	1477
35°	2767	2595	2299	2087	2013	1732
45°	2262	2036	1683	1444	1363	1747
55°	1720	1458	1094	892	828	1537
65°	1161	889	586	471	461	1151
75°	619	384	269	246	242	655
85°	145	74	64	64	64	173
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3719.7	3719.7	3719.7	3719.7	3719.7
2.5°	3736.5	3719.7	3682.5	3716.5	3709.7
5°	3719.7	3702.9	3659.0	3689.3	3679.3
7.5°	3689.3	3669.3	3622.2	3635.4	3618.6
10°	3649.0	3625.4	3558.3	3547.9	3527.9
12.5°	3598.6	3568.3	3477.2	3457.2	3420.0
15°	3537.9	3500.8	3386.5	3322.5	3289.0
17.5°	3467.2	3413.3	3271.8	3197.9	3144.0
20°	3386.5	3319.0	3150.7	3066.8	2992.5
22.5°	3299.0	3221.5	3026.1	2911.8	2861.5
25°	3211.5	3103.6	2881.5	2743.6	2692.9
27.5°	3107.2	2992.5	2746.8	2588.6	2511.1
30°	2996.1	2867.9	2598.6	2427.2	2336.1
32.5°	2888.2	2733.2	2457.5	2255.4	2171.1
35°	2767.2	2595.4	2299.3	2087.2	2012.9
37.5°	2649.3	2464.0	2151.1	1918.6	1834.7
40°	2524.7	2322.9	1996.1	1757.2	1669.7
42.5°	2396.8	2181.5	1841.4	1592.2	1508.2
45°	2262.2	2036.5	1683.2	1443.9	1363.2
47.5°	2134.3	1895.4	1531.8	1292.5	1218.6
50°	1992.9	1753.9	1383.6	1151.1	1080.7
52.5°	1854.7	1602.2	1242.2	1020.0	956.1
55°	1720.0	1457.5	1093.9	892.2	828.2
57.5°	1582.2	1312.9	962.9	774.3	720.4
60°	1440.7	1171.4	824.7	653.2	599.3
62.5°	1302.9	1033.6	706.8	545.4	518.6
65°	1161.4	888.6	585.7	471.4	461.1
67.5°	1026.8	753.9	471.4	413.9	403.9
70°	885.4	622.9	390.4	356.8	343.2
72.5°	750.7	501.4	326.4	299.6	292.9
75°	619.3	383.6	269.3	245.7	242.5
77.5°	488.2	272.5	212.1	198.6	191.8
80°	366.8	195.4	161.4	148.2	148.2
82.5°	255.7	131.4	111.1	104.3	104.3
85°	144.6	73.9	63.9	63.9	63.9
87.5°	53.9	26.8	26.8	23.6	23.6
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	14.71	16.23	15.07	16.54	16.86	10.67	12.19	11.03	12.50	12.82
	3H	16.47	17.84	16.85	18.16	18.53	11.93	13.30	12.31	13.62	13.99
	4H	17.14	18.42	17.54	18.77	19.14	12.43	13.71	12.83	14.06	14.44
	6H	17.63	18.81	18.04	19.18	19.57	12.81	14.00	13.23	14.36	14.75
	8H	17.79	18.92	18.22	19.31	19.71	12.94	14.06	13.36	14.45	14.86
	12H	17.89	18.97	18.32	19.35	19.78	13.02	14.10	13.45	14.48	14.91
4H	2H	14.81	16.09	15.21	16.44	16.82	11.36	12.64	11.76	12.99	13.37
	3H	16.74	17.81	17.15	18.21	18.61	12.80	13.87	13.21	14.27	14.67
	4H	17.49	18.45	17.92	18.86	19.30	13.40	14.36	13.84	14.78	15.21
	6H	18.08	18.92	18.54	19.36	19.82	13.89	14.72	14.35	15.17	15.63
	8H	18.30	19.08	18.76	19.52	19.99	14.05	14.83	14.52	15.28	15.74
	12H	18.45	19.15	18.93	19.62	20.10	14.17	14.87	14.65	15.34	15.81
8H	4H	17.52	18.29	17.98	18.74	19.20	13.76	14.53	14.22	14.98	15.45
	6H	18.15	18.80	18.65	19.29	19.76	14.34	14.99	14.84	15.48	15.96
	8H	18.40	18.98	18.92	19.49	19.98	14.57	15.14	15.08	15.65	16.14
	12H	18.61	19.12	19.12	19.61	20.17	14.74	15.25	15.25	15.75	16.31
12H	4H	17.50	18.20	17.98	18.67	19.14	13.80	14.50	14.28	14.97	15.44
	6H	18.13	18.71	18.65	19.22	19.71	14.41	14.98	14.92	15.49	15.98
	8H	18.42	18.93	18.93	19.42	19.99	14.68	15.19	15.19	15.68	16.25

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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