

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: P930628

Luminaire Tested: DFN2DS-PN3F0-090DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930628
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-PN3F0-090DS935-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

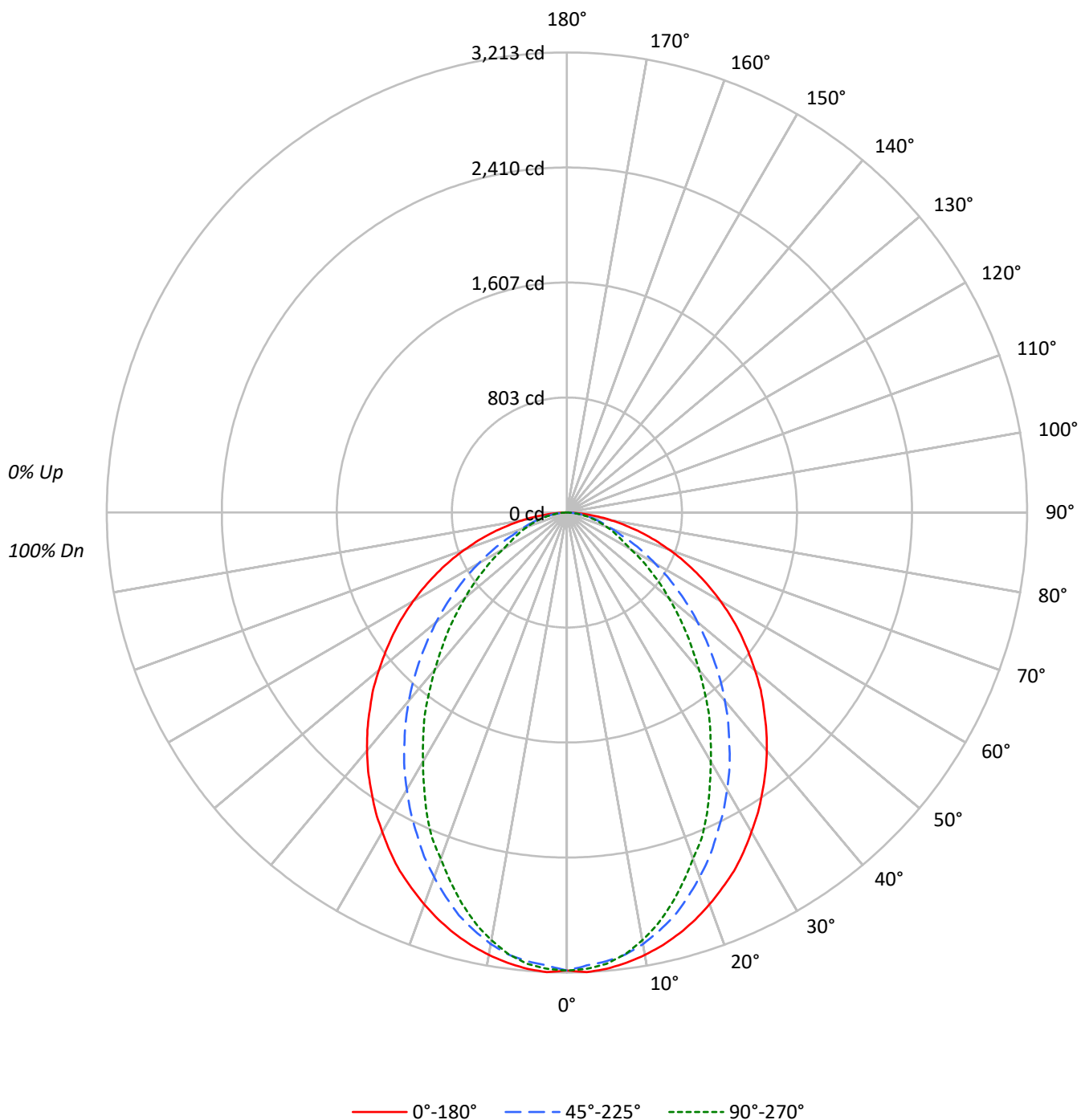
Lumens per Lamp: N/A
Luminaire Lumens: 6579.0 lumens
Efficiency: N/A
Efficacy: 67.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
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°	3739	3739	3739
5°	3754	3692	3713
10°	3725	3632	3601
15°	3682	3525	3423
20°	3623	3371	3202
25°	3562	3196	2987
30°	3478	3017	2712
35°	3396	2822	2470
40°	3313	2620	2191
45°	3216	2393	1938
50°	3117	2164	1690
55°	3015	1917	1452
60°	2897	1658	1205
65°	2763	1393	1097
70°	2602	1147	1009
75°	2406	1046	942
80°	2123	934	858
85°	1669	738	738

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3216 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.8	4.6
10°-20°	823.0	12.5
20°-30°	1155.5	17.6
30°-40°	1259.6	19.1
40°-50°	1157.7	17.6
50°-60°	909.2	13.8
60°-70°	591.8	9.0
70°-80°	304.6	4.6
80°-90°	77.8	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°	2278.3	34.6
0°-40°	3537.9	53.8
0°-60°	5604.8	85.2
0°-90°	6579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3199	3199	3199	3199	3199	
5°	3199	3184	3147	3173	3164	303
15°	3043	3011	2912	2857	2828	857
25°	2762	2669	2478	2360	2316	1270
35°	2380	2232	1977	1795	1731	1489
45°	1946	1751	1448	1242	1172	1502
55°	1479	1253	941	767	712	1322
65°	999	764	504	405	396	990
75°	533	330	232	211	209	563
85°	124	64	55	55	55	149
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3198.9	3198.9	3198.9	3198.9	3198.9
2.5°	3213.4	3198.9	3167.0	3196.2	3190.3
5°	3198.9	3184.5	3146.7	3172.8	3164.2
7.5°	3172.8	3155.6	3115.1	3126.4	3112.0
10°	3138.1	3117.8	3060.1	3051.2	3034.0
12.5°	3094.8	3068.7	2990.4	2973.2	2941.2
15°	3042.6	3010.7	2912.4	2857.4	2828.5
17.5°	2981.8	2935.4	2813.7	2750.2	2703.8
20°	2912.4	2854.3	2709.6	2637.4	2573.6
22.5°	2837.1	2770.5	2602.4	2504.1	2460.9
25°	2761.9	2669.1	2478.1	2359.5	2315.9
27.5°	2672.2	2573.6	2362.2	2226.2	2159.5
30°	2576.6	2466.4	2234.8	2087.4	2009.0
32.5°	2483.9	2350.6	2113.4	1939.6	1867.1
35°	2379.8	2232.0	1977.4	1795.0	1731.1
37.5°	2278.4	2119.0	1849.9	1650.0	1577.8
40°	2171.2	1997.7	1716.6	1511.2	1435.9
42.5°	2061.2	1876.1	1583.6	1369.3	1297.1
45°	1945.5	1751.4	1447.6	1241.8	1172.4
47.5°	1835.5	1630.0	1317.3	1111.6	1048.0
50°	1713.9	1508.4	1189.9	989.9	929.4
52.5°	1595.0	1377.9	1068.3	877.2	822.2
55°	1479.2	1253.4	940.8	767.3	712.3
57.5°	1360.7	1129.1	828.1	665.9	619.5
60°	1239.0	1007.4	709.2	561.8	515.4
62.5°	1120.5	888.9	607.8	469.0	446.0
65°	998.8	764.2	503.7	405.4	396.5
67.5°	883.0	648.4	405.4	356.0	347.4
70°	761.4	535.7	335.7	306.8	295.2
72.5°	645.6	431.2	280.7	257.7	251.9
75°	532.6	329.9	231.6	211.3	208.6
77.5°	419.9	234.4	182.4	170.8	164.9
80°	315.4	168.0	138.8	127.5	127.5
82.5°	219.9	113.0	95.5	89.7	89.7
85°	124.4	63.6	55.0	55.0	55.0
87.5°	46.4	23.0	23.0	20.3	20.3
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	15.82	17.34	16.18	17.65	17.97	11.78	13.30	12.14	13.61	13.93
	3H	17.58	18.95	17.96	19.28	19.64	13.04	14.41	13.42	14.74	15.10
	4H	18.25	19.53	18.65	19.88	20.26	13.54	14.83	13.94	15.17	15.55
	6H	18.74	19.92	19.15	20.29	20.68	13.93	15.11	14.34	15.48	15.87
	8H	18.90	20.03	19.33	20.42	20.82	14.05	15.18	14.48	15.57	15.97
	12H	19.01	20.08	19.44	20.47	20.90	14.13	15.21	14.56	15.59	16.02
4H	2H	15.92	17.20	16.32	17.55	17.93	12.47	13.75	12.87	14.10	14.48
	3H	17.85	18.92	18.27	19.32	19.72	13.92	14.98	14.33	15.38	15.78
	4H	18.60	19.56	19.04	19.98	20.41	14.52	15.47	14.95	15.89	16.33
	6H	19.20	20.03	19.65	20.47	20.93	15.00	15.84	15.46	16.28	16.74
	8H	19.41	20.19	19.87	20.63	21.10	15.17	15.94	15.63	16.39	16.85
	12H	19.56	20.26	20.05	20.74	21.21	15.28	15.98	15.77	16.46	16.93
8H	4H	18.63	19.41	19.09	19.85	20.32	14.87	15.65	15.33	16.09	16.56
	6H	19.27	19.91	19.76	20.40	20.88	15.46	16.10	15.95	16.59	17.07
	8H	19.52	20.09	20.03	20.60	21.09	15.68	16.25	16.19	16.76	17.25
	12H	19.72	20.23	20.23	20.72	21.29	15.86	16.37	16.37	16.86	17.42
12H	4H	18.61	19.31	19.09	19.79	20.26	14.91	15.61	15.40	16.09	16.56
	6H	19.25	19.82	19.76	20.33	20.82	15.52	16.10	16.03	16.61	17.10
	8H	19.53	20.04	20.04	20.53	21.10	15.79	16.30	16.30	16.79	17.36