

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: P930441

Luminaire Tested: DFN2DS-PN2F0-030DS850-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930441
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-PN2F0-030DS850-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

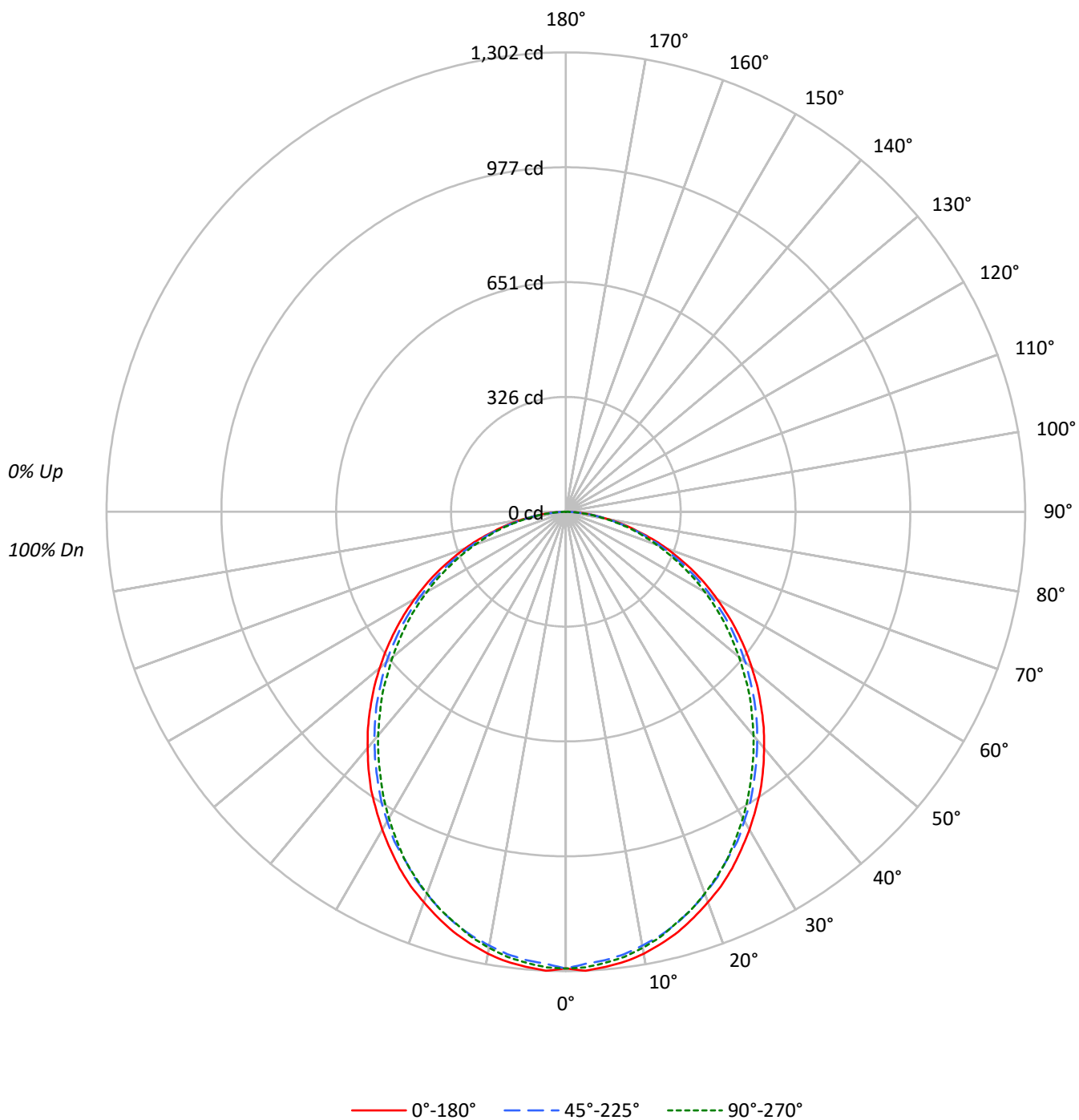
Lumens per Lamp: N/A
Luminaire Lumens: 3293.8 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 30.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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°	2804	2804	2804
5°	2814	2774	2790
10°	2798	2746	2760
15°	2763	2710	2708
20°	2714	2657	2654
25°	2665	2591	2591
30°	2603	2531	2509
35°	2544	2459	2422
40°	2471	2386	2341
45°	2399	2314	2257
50°	2320	2240	2160
55°	2238	2153	2073
60°	2146	2049	1974
65°	2048	1946	1857
70°	1924	1821	1734
75°	1749	1677	1636
80°	1553	1505	1429
85°	1267	1208	1083

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2399 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.8	3.7
10°-20°	342.8	10.4
20°-30°	503.8	15.3
30°-40°	585.2	17.8
40°-50°	584.4	17.7
50°-60°	509.6	15.5
60°-70°	376.7	11.4
70°-80°	213.1	6.5
80°-90°	56.3	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°	968.5	29.4
0°-40°	1553.6	47.2
0°-60°	2647.7	80.4
0°-90°	3293.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3293.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1294	1294	1294	1294	1294	
5°	1294	1290	1276	1286	1283	123
15°	1232	1225	1209	1214	1208	347
25°	1115	1106	1084	1087	1084	513
35°	962	950	930	922	916	601
45°	783	774	756	742	737	604
55°	593	585	570	555	549	530
65°	400	392	380	368	362	395
75°	209	207	200	193	196	223
85°	51	50	49	45	44	60
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1294.5	1294.5	1294.5	1294.5	1294.5
2.5°	1302.1	1295.9	1282.1	1294.5	1292.2
5°	1294.5	1289.7	1275.9	1285.9	1283.4
7.5°	1285.9	1278.5	1264.7	1274.8	1272.2
10°	1272.2	1263.5	1248.6	1258.5	1254.8
12.5°	1253.5	1246.1	1231.2	1237.3	1234.9
15°	1232.3	1225.0	1208.7	1213.7	1207.5
17.5°	1206.1	1198.8	1182.5	1188.7	1182.5
20°	1177.5	1170.1	1152.7	1156.4	1151.5
22.5°	1149.0	1137.8	1121.5	1121.5	1119.0
25°	1115.3	1105.5	1084.3	1086.7	1084.3
27.5°	1077.9	1069.2	1053.1	1049.4	1043.2
30°	1040.7	1030.7	1012.1	1008.3	1003.3
32.5°	1000.9	993.4	973.5	965.9	960.9
35°	962.3	949.9	929.9	922.4	916.1
37.5°	918.7	907.5	887.5	878.8	872.6
40°	873.9	863.9	843.9	832.9	827.9
42.5°	830.3	820.3	800.5	787.9	780.5
45°	783.1	774.3	755.6	741.9	736.9
47.5°	736.9	728.3	708.3	694.6	687.1
50°	688.4	682.1	664.7	647.3	641.1
52.5°	641.1	632.4	616.3	602.5	593.8
55°	592.6	585.1	570.1	555.3	549.1
57.5°	544.0	537.8	521.6	506.6	501.6
60°	495.4	490.5	473.1	459.3	455.7
62.5°	448.1	439.4	427.0	414.5	409.6
65°	399.7	392.1	379.7	368.5	362.3
67.5°	349.9	343.6	332.4	323.7	318.7
70°	303.8	298.8	287.6	278.8	273.9
72.5°	256.5	251.4	245.2	236.5	232.9
75°	209.0	206.7	200.4	193.0	195.5
77.5°	166.8	161.8	159.3	155.6	151.9
80°	124.5	123.2	120.7	117.0	114.6
82.5°	84.6	84.6	83.5	78.4	78.4
85°	51.0	49.8	48.6	44.8	43.6
87.5°	22.4	20.0	17.4	13.8	12.4
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	14.86	16.48	15.23	16.79	17.10	14.42	16.03	14.78	16.34	16.66
	3H	16.62	18.07	16.99	18.40	18.76	16.12	17.58	16.50	17.90	18.26
	4H	17.26	18.63	17.66	18.98	19.35	16.77	18.14	17.16	18.48	18.86
	6H	17.73	19.00	18.14	19.36	19.75	17.23	18.50	17.64	18.86	19.25
	8H	17.87	19.08	18.30	19.47	19.87	17.37	18.58	17.80	18.97	19.37
	12H	17.96	19.12	18.39	19.51	19.93	17.45	18.61	17.88	18.99	19.42
4H	2H	15.43	16.79	15.82	17.14	17.52	15.07	16.44	15.47	16.79	17.16
	3H	17.40	18.55	17.81	18.94	19.34	16.99	18.14	17.40	18.54	18.94
	4H	18.18	19.21	18.61	19.63	20.06	17.75	18.79	18.18	19.20	19.64
	6H	18.77	19.68	19.23	20.12	20.57	18.34	19.25	18.80	19.69	20.14
	8H	18.96	19.81	19.42	20.25	20.72	18.52	19.37	18.99	19.81	20.28
	12H	19.09	19.85	19.57	20.33	20.80	18.64	19.40	19.12	19.88	20.35
8H	4H	18.45	19.30	18.91	19.74	20.20	18.08	18.92	18.54	19.36	19.83
	6H	19.16	19.87	19.66	20.36	20.83	18.78	19.49	19.28	19.97	20.45
	8H	19.42	20.05	19.93	20.56	21.05	19.03	19.66	19.54	20.17	20.66
	12H	19.62	20.18	20.13	20.67	21.23	19.21	19.77	19.72	20.26	20.82
12H	4H	18.48	19.24	18.96	19.71	20.18	18.11	18.87	18.59	19.35	19.82
	6H	19.21	19.84	19.72	20.35	20.83	18.84	19.47	19.35	19.98	20.47
	8H	19.52	20.08	20.03	20.57	21.13	19.15	19.70	19.65	20.19	20.76