

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: P930707

Luminaire Tested: DFN2DS-PN4F0-080DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930707
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-PN4F0-080DS835-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

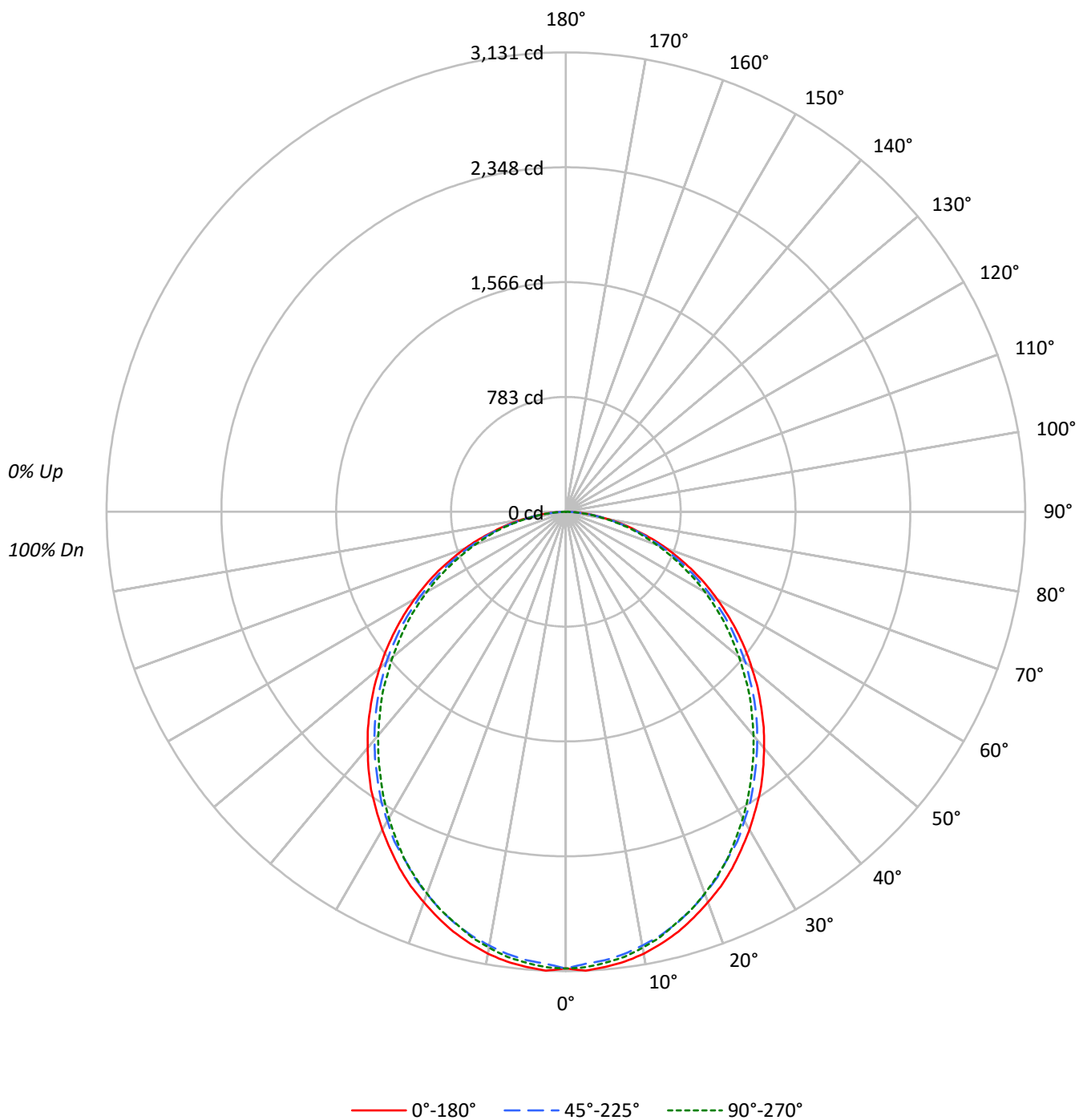
Lumens per Lamp: N/A
Luminaire Lumens: 7920.0 lumens
Efficiency: N/A
Efficacy: 96.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 81.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	73	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	62	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	54	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	47	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	41	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	37	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	33	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2272	2272	2272
5°	2281	2248	2261
10°	2268	2225	2236
15°	2239	2196	2194
20°	2200	2153	2151
25°	2160	2100	2100
30°	2109	2051	2034
35°	2062	1993	1963
40°	2002	1934	1897
45°	1944	1876	1829
50°	1880	1815	1751
55°	1813	1745	1680
60°	1739	1661	1599
65°	1660	1577	1505
70°	1559	1476	1406
75°	1418	1359	1326
80°	1259	1220	1157
85°	1027	979	878

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1944 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.0	3.7
10°-20°	824.3	10.4
20°-30°	1211.5	15.3
30°-40°	1407.0	17.8
40°-50°	1405.3	17.7
50°-60°	1225.4	15.5
60°-70°	905.8	11.4
70°-80°	512.5	6.5
80°-90°	135.3	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°	2328.8	29.4
0°-40°	3735.8	47.2
0°-60°	6366.4	80.4
0°-90°	7920.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7920.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3113	3113	3113	3113	3113	
5°	3113	3101	3068	3092	3086	295
15°	2963	2946	2906	2918	2904	835
25°	2682	2658	2607	2613	2607	1234
35°	2314	2284	2236	2218	2203	1445
45°	1883	1862	1817	1784	1772	1453
55°	1425	1407	1371	1335	1320	1274
65°	961	943	913	886	871	950
75°	503	497	482	464	470	537
85°	123	120	117	108	105	144
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3112.8	3112.8	3112.8	3112.8	3112.8
2.5°	3130.9	3116.0	3083.0	3112.8	3107.1
5°	3112.8	3101.1	3068.1	3091.9	3086.2
7.5°	3091.9	3074.1	3041.1	3065.2	3059.2
10°	3059.2	3038.2	3002.3	3026.1	3017.3
12.5°	3014.1	2996.3	2960.4	2975.3	2969.3
15°	2963.3	2945.5	2906.4	2918.5	2903.6
17.5°	2900.4	2882.6	2843.5	2858.5	2843.5
20°	2831.5	2813.7	2771.8	2780.7	2768.9
22.5°	2762.9	2735.9	2696.8	2696.8	2690.8
25°	2681.9	2658.1	2607.3	2613.0	2607.3
27.5°	2592.0	2571.1	2532.3	2523.4	2508.5
30°	2502.5	2478.3	2433.6	2424.7	2412.6
32.5°	2406.6	2388.8	2340.8	2322.7	2310.7
35°	2313.8	2284.0	2236.0	2217.9	2203.0
37.5°	2209.0	2182.0	2134.1	2113.1	2098.2
40°	2101.4	2077.2	2029.3	2002.6	1990.5
42.5°	1996.6	1972.4	1924.8	1894.6	1876.9
45°	1882.9	1861.9	1816.8	1784.1	1772.1
47.5°	1772.1	1751.1	1703.1	1670.1	1652.3
50°	1655.2	1640.3	1598.3	1556.4	1541.5
52.5°	1541.5	1520.5	1481.8	1448.8	1427.8
55°	1424.9	1406.8	1371.0	1335.1	1320.1
57.5°	1308.1	1293.2	1254.1	1218.2	1206.1
60°	1191.2	1179.5	1137.5	1104.5	1095.6
62.5°	1077.5	1056.6	1026.7	996.9	984.8
65°	961.0	942.9	913.0	886.0	871.1
67.5°	841.2	826.0	799.3	778.4	766.3
70°	730.4	718.3	691.4	670.4	658.6
72.5°	616.7	604.7	589.7	568.8	559.9
75°	502.7	497.0	481.8	464.0	470.0
77.5°	401.1	389.0	383.0	374.1	365.2
80°	299.5	296.3	290.3	281.4	275.3
82.5°	203.6	203.6	200.7	188.6	188.6
85°	122.6	119.7	116.9	107.7	104.8
87.5°	54.0	48.0	41.9	33.0	29.9
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	14.13	15.75	14.50	16.06	16.37	13.69	15.30	14.05	15.61	15.93
	3H	15.88	17.34	16.26	17.67	18.03	15.39	16.85	15.77	17.17	17.53
	4H	16.53	17.90	16.93	18.25	18.62	16.04	17.40	16.43	17.75	18.13
	6H	17.00	18.27	17.41	18.63	19.02	16.50	17.77	16.91	18.13	18.52
	8H	17.14	18.35	17.57	18.74	19.14	16.64	17.85	17.06	18.24	18.64
	12H	17.23	18.39	17.66	18.77	19.20	16.72	17.88	17.15	18.26	18.69
4H	2H	14.69	16.06	15.09	16.41	16.79	14.34	15.71	14.74	16.06	16.43
	3H	16.67	17.82	17.08	18.21	18.61	16.26	17.41	16.67	17.81	18.21
	4H	17.45	18.48	17.88	18.90	19.33	17.02	18.06	17.45	18.47	18.91
	6H	18.04	18.95	18.50	19.39	19.84	17.61	18.52	18.06	18.96	19.41
	8H	18.23	19.08	18.69	19.52	19.99	17.79	18.64	18.25	19.08	19.55
	12H	18.36	19.12	18.84	19.60	20.07	17.91	18.67	18.39	19.15	19.62
8H	4H	17.72	18.57	18.18	19.01	19.47	17.35	18.19	17.81	18.63	19.10
	6H	18.43	19.14	18.93	19.63	20.10	18.05	18.76	18.55	19.24	19.72
	8H	18.69	19.32	19.20	19.83	20.32	18.30	18.93	18.81	19.44	19.93
	12H	18.89	19.45	19.40	19.94	20.50	18.48	19.04	18.99	19.53	20.09
12H	4H	17.75	18.51	18.23	18.98	19.45	17.38	18.14	17.86	18.62	19.09
	6H	18.48	19.11	18.99	19.62	20.10	18.11	18.74	18.62	19.25	19.74
	8H	18.79	19.35	19.30	19.84	20.40	18.42	18.97	18.92	19.46	20.02