

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: P930705

Luminaire Tested: DFN2DS-PN4F0-080DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930705
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-PN4F0-080DS830-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

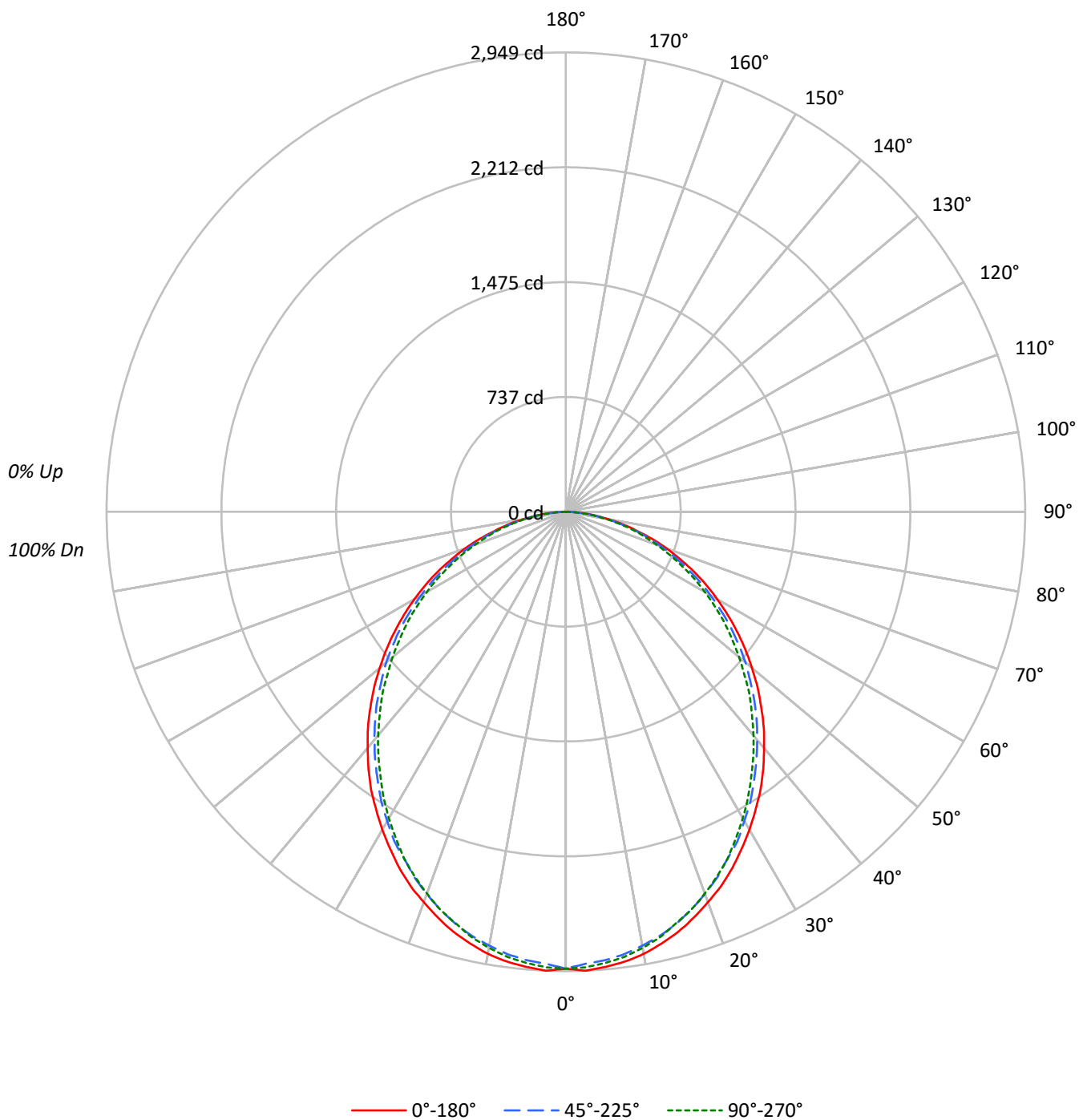
Lumens per Lamp: N/A
Luminaire Lumens: 7460.7 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

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
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°	2140	2140	2140
5°	2149	2118	2130
10°	2136	2096	2107
15°	2109	2069	2067
20°	2072	2028	2026
25°	2035	1978	1978
30°	1987	1932	1916
35°	1942	1877	1849
40°	1886	1822	1787
45°	1831	1767	1723
50°	1771	1710	1649
55°	1708	1644	1583
60°	1638	1564	1507
65°	1564	1485	1417
70°	1468	1390	1324
75°	1335	1280	1249
80°	1186	1150	1090
85°	967	922	827

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1831 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.0	3.7
10°-20°	776.5	10.4
20°-30°	1141.2	15.3
30°-40°	1325.4	17.8
40°-50°	1323.8	17.7
50°-60°	1154.3	15.5
60°-70°	853.3	11.4
70°-80°	482.8	6.5
80°-90°	127.4	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°	2193.7	29.4
0°-40°	3519.1	47.2
0°-60°	5997.2	80.4
0°-90°	7460.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7460.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2932	2932	2932	2932	2932	
5°	2932	2921	2890	2913	2907	278
15°	2791	2775	2738	2749	2735	786
25°	2526	2504	2456	2461	2456	1163
35°	2180	2152	2106	2089	2075	1361
45°	1774	1754	1711	1681	1669	1369
55°	1342	1325	1292	1258	1244	1200
65°	905	888	860	835	821	895
75°	474	468	454	437	443	505
85°	116	113	110	102	99	136
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	2949.3	2935.3	2904.2	2932.3	2926.9
5°	2932.3	2921.2	2890.2	2912.6	2907.2
7.5°	2912.6	2895.8	2864.7	2887.4	2881.8
10°	2881.8	2862.0	2828.2	2850.6	2842.3
12.5°	2839.3	2822.5	2788.7	2802.7	2797.1
15°	2791.4	2774.7	2737.8	2749.2	2735.2
17.5°	2732.2	2715.4	2678.6	2692.7	2678.6
20°	2667.3	2650.5	2611.0	2619.4	2608.3
22.5°	2602.7	2577.2	2540.4	2540.4	2534.7
25°	2526.3	2503.9	2456.1	2461.4	2456.1
27.5°	2441.7	2422.0	2385.4	2377.0	2363.0
30°	2357.4	2334.6	2292.5	2284.1	2272.7
32.5°	2267.0	2250.2	2205.0	2188.0	2176.7
35°	2179.6	2151.5	2106.3	2089.3	2075.2
37.5°	2080.9	2055.4	2010.3	1990.5	1976.5
40°	1979.5	1956.7	1911.6	1886.4	1875.1
42.5°	1880.8	1858.0	1813.2	1784.7	1768.0
45°	1773.7	1753.9	1711.4	1680.6	1669.3
47.5°	1669.3	1649.5	1604.3	1573.2	1556.5
50°	1559.2	1545.2	1505.6	1466.1	1452.1
52.5°	1452.1	1432.3	1395.9	1364.8	1345.0
55°	1342.3	1325.2	1291.5	1257.7	1243.5
57.5°	1232.2	1218.2	1181.4	1147.5	1136.1
60°	1122.1	1111.1	1071.5	1040.4	1032.1
62.5°	1015.0	995.3	967.2	939.1	927.7
65°	905.3	888.2	860.0	834.6	820.6
67.5°	792.4	778.1	752.9	733.3	721.9
70°	688.0	676.6	651.3	631.5	620.4
72.5°	580.9	569.6	555.5	535.8	527.4
75°	473.5	468.2	453.9	437.1	442.7
77.5°	377.8	366.4	360.8	352.4	344.0
80°	282.1	279.1	273.5	265.1	259.3
82.5°	191.8	191.8	189.1	177.7	177.7
85°	115.5	112.8	110.1	101.5	98.7
87.5°	50.9	45.2	39.5	31.1	28.2
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	13.93	15.54	14.29	15.85	16.17	13.48	15.09	13.85	15.41	15.72
	3H	15.68	17.13	16.05	17.46	17.82	15.19	16.64	15.56	16.97	17.33
	4H	16.32	17.69	16.72	18.04	18.42	15.83	17.20	16.23	17.54	17.92
	6H	16.79	18.06	17.20	18.43	18.82	16.29	17.56	16.70	17.92	18.31
	8H	16.94	18.15	17.36	18.53	18.93	16.43	17.64	16.86	18.03	18.43
	12H	17.03	18.19	17.45	18.57	19.00	16.51	17.67	16.94	18.05	18.48
4H	2H	14.49	15.86	14.89	16.20	16.58	14.13	15.50	14.53	15.85	16.23
	3H	16.46	17.61	16.87	18.01	18.41	16.06	17.20	16.46	17.60	18.00
	4H	17.24	18.27	17.67	18.69	19.12	16.81	17.85	17.25	18.26	18.70
	6H	17.84	18.74	18.29	19.18	19.64	17.40	18.31	17.86	18.75	19.20
	8H	18.02	18.87	18.49	19.31	19.78	17.59	18.43	18.05	18.88	19.34
	12H	18.16	18.92	18.64	19.39	19.86	17.70	18.46	18.18	18.94	19.41
8H	4H	17.51	18.36	17.97	18.80	19.27	17.14	17.98	17.60	18.43	18.89
	6H	18.23	18.93	18.72	19.42	19.89	17.84	18.55	18.34	19.04	19.51
	8H	18.49	19.12	19.00	19.62	20.11	18.09	18.72	18.60	19.23	19.72
	12H	18.69	19.24	19.19	19.73	20.30	18.27	18.83	18.78	19.32	19.88
12H	4H	17.54	18.30	18.02	18.77	19.24	17.17	17.93	17.65	18.41	18.88
	6H	18.27	18.90	18.78	19.41	19.90	17.90	18.54	18.41	19.04	19.53
	8H	18.59	19.14	19.09	19.63	20.20	18.21	18.77	18.71	19.26	19.82