

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: P930687

Luminaire Tested: DFN2DS-PN4F0-070DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930687
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-PN4F0-070DS830-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

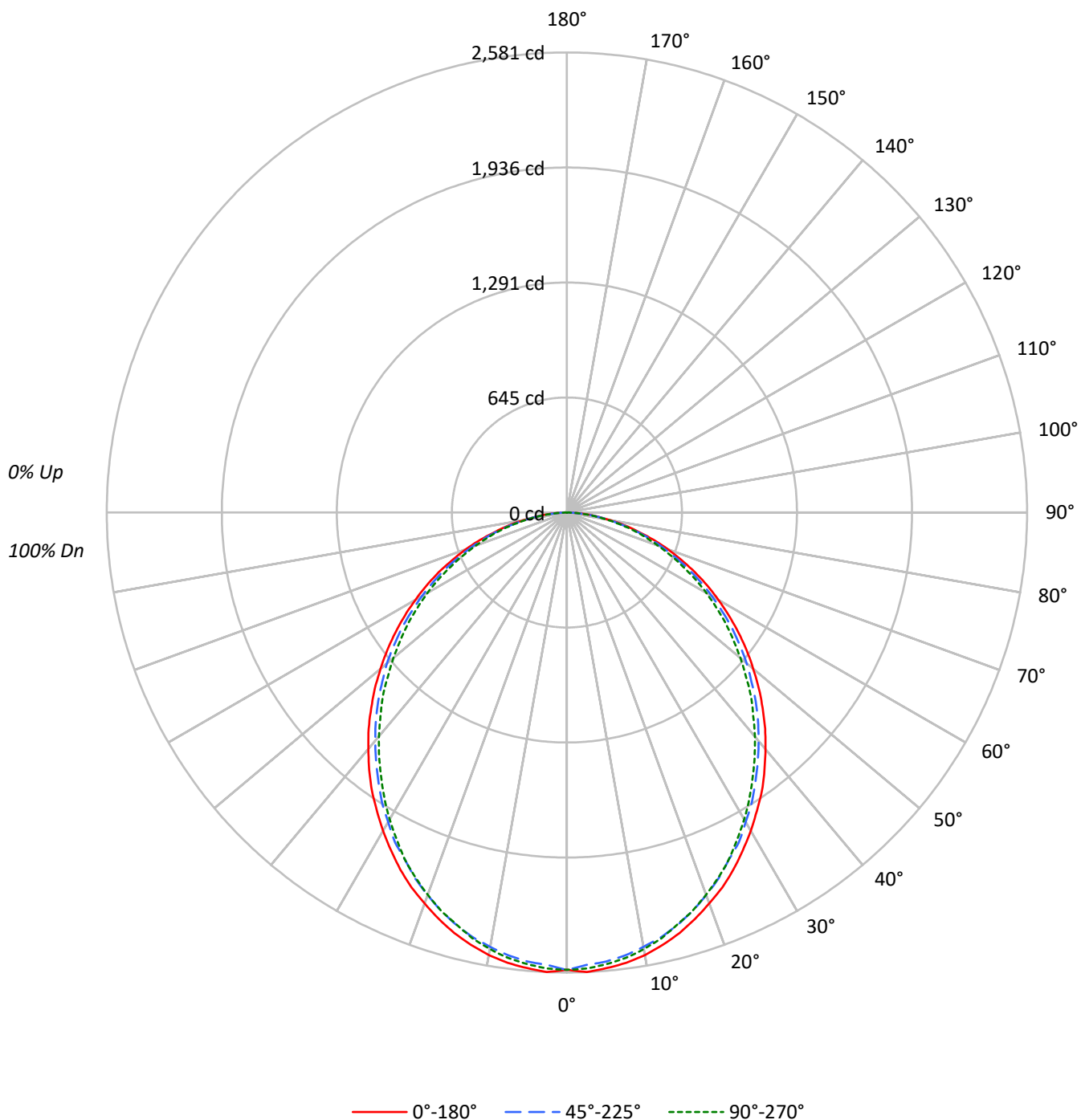
Lumens per Lamp: N/A
Luminaire Lumens: 6528.1 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
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°	1873	1873	1873
5°	1880	1853	1864
10°	1869	1834	1843
15°	1846	1810	1809
20°	1813	1775	1773
25°	1780	1731	1731
30°	1739	1691	1676
35°	1700	1642	1618
40°	1651	1594	1563
45°	1602	1546	1508
50°	1549	1496	1443
55°	1495	1438	1385
60°	1433	1369	1318
65°	1368	1300	1240
70°	1285	1216	1159
75°	1169	1120	1093
80°	1037	1006	954
85°	847	807	724

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1602 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.5	3.7
10°-20°	679.5	10.4
20°-30°	998.5	15.3
30°-40°	1159.7	17.8
40°-50°	1158.3	17.7
50°-60°	1010.0	15.5
60°-70°	746.6	11.4
70°-80°	422.4	6.5
80°-90°	111.5	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°	1919.5	29.4
0°-40°	3079.2	47.2
0°-60°	5247.5	80.4
0°-90°	6528.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6528.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2566	2566	2566	2566	2566	
5°	2566	2556	2529	2548	2544	244
15°	2442	2428	2396	2406	2393	688
25°	2211	2191	2149	2154	2149	1017
35°	1907	1883	1843	1828	1816	1191
45°	1552	1535	1498	1471	1461	1198
55°	1174	1160	1130	1100	1088	1050
65°	792	777	753	730	718	783
75°	414	410	397	382	387	442
85°	101	99	96	89	86	119
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2565.7	2565.7	2565.7	2565.7	2565.7
2.5°	2580.7	2568.4	2541.1	2565.7	2561.0
5°	2565.7	2556.1	2528.9	2548.5	2543.8
7.5°	2548.5	2533.8	2506.6	2526.5	2521.5
10°	2521.5	2504.2	2474.6	2494.3	2487.0
12.5°	2484.3	2469.7	2440.2	2452.4	2447.4
15°	2442.5	2427.8	2395.6	2405.6	2393.2
17.5°	2390.6	2376.0	2343.8	2356.1	2343.8
20°	2333.8	2319.2	2284.6	2292.0	2282.3
22.5°	2277.3	2255.1	2222.8	2222.8	2217.8
25°	2210.6	2190.9	2149.1	2153.8	2149.1
27.5°	2136.5	2119.2	2087.3	2079.9	2067.6
30°	2062.7	2042.7	2005.9	1998.5	1988.6
32.5°	1983.6	1969.0	1929.4	1914.5	1904.5
35°	1907.2	1882.6	1843.0	1828.1	1815.8
37.5°	1820.8	1798.6	1759.0	1741.8	1729.4
40°	1732.1	1712.2	1672.6	1650.7	1640.7
42.5°	1645.7	1625.8	1586.5	1561.6	1547.0
45°	1551.9	1534.7	1497.5	1470.6	1460.6
47.5°	1460.6	1443.3	1403.8	1376.5	1361.9
50°	1364.3	1352.0	1317.4	1282.9	1270.6
52.5°	1270.6	1253.3	1221.4	1194.2	1176.8
55°	1174.5	1159.6	1130.0	1100.4	1088.1
57.5°	1078.2	1065.9	1033.7	1004.1	994.2
60°	981.8	972.1	937.7	910.4	903.1
62.5°	888.1	870.9	846.3	821.7	811.7
65°	792.1	777.2	752.6	730.3	718.0
67.5°	693.4	680.9	658.8	641.6	631.6
70°	602.0	592.1	569.8	552.6	542.9
72.5°	508.3	498.4	486.1	468.8	461.5
75°	414.4	409.7	397.1	382.5	387.4
77.5°	330.6	320.7	315.7	308.3	301.1
80°	246.8	244.3	239.3	231.9	226.9
82.5°	167.8	167.8	165.4	155.5	155.5
85°	101.1	98.7	96.4	88.7	86.4
87.5°	44.5	39.6	34.6	27.2	24.6
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	13.46	15.07	13.83	15.39	15.70	13.02	14.63	13.38	14.94	15.26
	3H	15.21	16.67	15.59	16.99	17.35	14.72	16.18	15.10	16.50	16.86
	4H	15.86	17.23	16.26	17.58	17.95	15.36	16.73	15.76	17.08	17.46
	6H	16.33	17.60	16.74	17.96	18.35	15.83	17.10	16.24	17.46	17.85
	8H	16.47	17.68	16.90	18.07	18.47	15.97	17.18	16.39	17.57	17.97
	12H	16.56	17.72	16.99	18.10	18.53	16.05	17.21	16.48	17.59	18.02
4H	2H	14.02	15.39	14.42	15.74	16.12	13.67	15.04	14.07	15.39	15.76
	3H	16.00	17.14	16.41	17.54	17.94	15.59	16.74	16.00	17.14	17.54
	4H	16.77	17.81	17.21	18.22	18.66	16.35	17.39	16.78	17.80	18.24
	6H	17.37	18.28	17.83	18.72	19.17	16.94	17.84	17.39	18.28	18.74
	8H	17.56	18.41	18.02	18.85	19.32	17.12	17.97	17.58	18.41	18.88
	12H	17.69	18.45	18.17	18.93	19.40	17.24	18.00	17.72	18.48	18.95
8H	4H	17.05	17.89	17.51	18.34	18.80	16.67	17.52	17.13	17.96	18.43
	6H	17.76	18.47	18.26	18.95	19.43	17.38	18.08	17.87	18.57	19.05
	8H	18.02	18.65	18.53	19.16	19.65	17.63	18.26	18.14	18.77	19.25
	12H	18.22	18.78	18.73	19.27	19.83	17.81	18.37	18.32	18.86	19.42
12H	4H	17.07	17.83	17.55	18.31	18.78	16.71	17.47	17.19	17.95	18.41
	6H	17.81	18.44	18.32	18.95	19.43	17.44	18.07	17.95	18.58	19.06
	8H	18.12	18.68	18.63	19.17	19.73	17.74	18.30	18.25	18.79	19.35