

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: P930697

Luminaire Tested: DFN2DS-PN4F0-070DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930697
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-PN4F0-070DS930-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

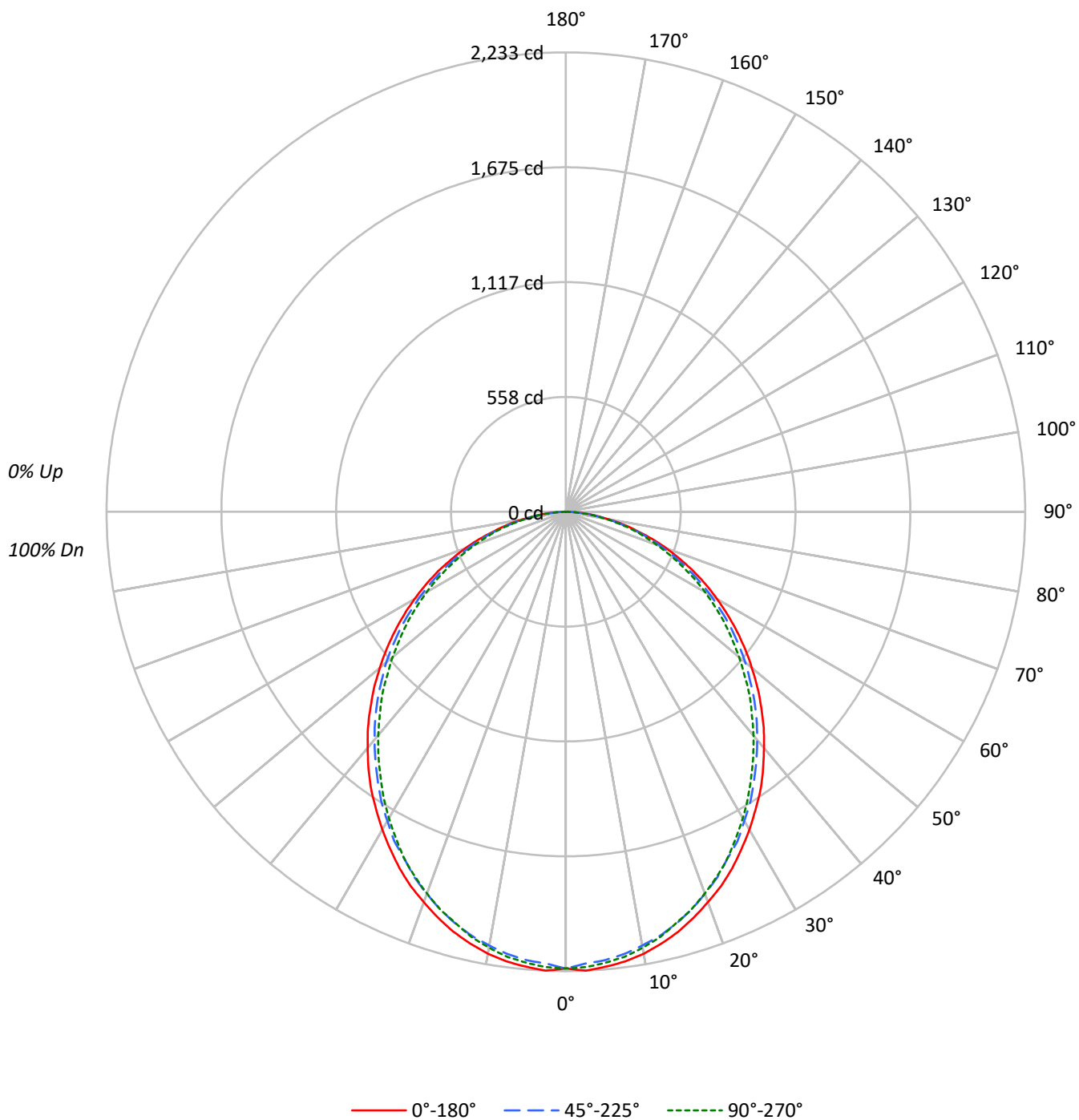
Lumens per Lamp: N/A
Luminaire Lumens: 5648.0 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	1620	1620	1620
5°	1627	1603	1613
10°	1617	1587	1595
15°	1597	1566	1565
20°	1569	1535	1534
25°	1540	1498	1498
30°	1504	1463	1450
35°	1470	1421	1400
40°	1428	1379	1353
45°	1386	1337	1305
50°	1340	1294	1248
55°	1293	1244	1198
60°	1240	1184	1141
65°	1184	1125	1073
70°	1112	1052	1002
75°	1011	969	945
80°	897	870	825
85°	732	699	626

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1386 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.9	3.7
10°-20°	587.9	10.4
20°-30°	863.9	15.3
30°-40°	1003.4	17.8
40°-50°	1002.1	17.7
50°-60°	873.8	15.5
60°-70°	646.0	11.4
70°-80°	365.5	6.5
80°-90°	96.5	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°	1660.7	29.4
0°-40°	2664.1	47.2
0°-60°	4540.1	80.4
0°-90°	5648.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5648.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2220	2220	2220	2220	2220	
5°	2220	2212	2188	2205	2201	211
15°	2113	2100	2073	2081	2071	595
25°	1913	1896	1859	1863	1859	880
35°	1650	1629	1594	1582	1571	1030
45°	1343	1328	1296	1272	1264	1036
55°	1016	1003	978	952	941	908
65°	685	672	651	632	621	678
75°	358	354	344	331	335	383
85°	87	85	83	77	75	103
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2219.8	2219.8	2219.8	2219.8	2219.8
2.5°	2232.8	2222.1	2198.5	2219.8	2215.7
5°	2219.8	2211.5	2187.9	2204.9	2200.8
7.5°	2204.9	2192.2	2168.6	2185.9	2181.6
10°	2181.6	2166.6	2141.0	2158.0	2151.7
12.5°	2149.4	2136.8	2111.2	2121.8	2117.5
15°	2113.2	2100.5	2072.6	2081.3	2070.6
17.5°	2068.3	2055.7	2027.8	2038.5	2027.8
20°	2019.2	2006.5	1976.6	1983.0	1974.6
22.5°	1970.3	1951.0	1923.2	1923.2	1918.8
25°	1912.6	1895.5	1859.3	1863.4	1859.3
27.5°	1848.4	1833.5	1805.9	1799.5	1788.8
30°	1784.6	1767.3	1735.5	1729.1	1720.5
32.5°	1716.1	1703.5	1669.3	1656.4	1647.8
35°	1650.0	1628.8	1594.5	1581.7	1571.0
37.5°	1575.3	1556.1	1521.8	1506.9	1496.3
40°	1498.5	1481.3	1447.1	1428.1	1419.5
42.5°	1423.8	1406.6	1372.6	1351.1	1338.4
45°	1342.7	1327.8	1295.6	1272.3	1263.7
47.5°	1263.7	1248.7	1214.5	1191.0	1178.3
50°	1180.4	1169.7	1139.8	1109.9	1099.3
52.5°	1099.3	1084.4	1056.7	1033.2	1018.2
55°	1016.1	1003.3	977.7	952.1	941.4
57.5°	932.8	922.2	894.3	868.7	860.2
60°	849.5	841.1	811.3	787.7	781.3
62.5°	768.4	753.5	732.2	710.9	702.3
65°	685.3	672.4	651.1	631.9	621.2
67.5°	599.9	589.1	570.0	555.1	546.5
70°	520.9	512.3	493.0	478.1	469.7
72.5°	439.8	431.2	420.5	405.6	399.3
75°	358.5	354.4	343.5	330.9	335.2
77.5°	286.1	277.4	273.1	266.7	260.5
80°	213.5	211.3	207.0	200.7	196.3
82.5°	145.2	145.2	143.1	134.6	134.6
85°	87.4	85.4	83.4	76.8	74.7
87.5°	38.5	34.2	29.9	23.6	21.3
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	12.96	14.57	13.32	14.88	15.20	12.52	14.13	12.88	14.44	14.75
	3H	14.71	16.16	15.09	16.49	16.85	14.22	15.67	14.60	16.00	16.36
	4H	15.36	16.73	15.75	17.07	17.45	14.86	16.23	15.26	16.58	16.95
	6H	15.83	17.09	16.24	17.46	17.85	15.32	16.59	15.73	16.96	17.35
	8H	15.97	17.18	16.39	17.57	17.97	15.47	16.68	15.89	17.07	17.46
	12H	16.06	17.22	16.49	17.60	18.03	15.55	16.71	15.98	17.09	17.52
4H	2H	13.52	14.89	13.92	15.24	15.61	13.17	14.54	13.57	14.88	15.26
	3H	15.50	16.64	15.90	17.04	17.44	15.09	16.23	15.50	16.63	17.03
	4H	16.27	17.31	16.70	17.72	18.16	15.85	16.88	16.28	17.30	17.73
	6H	16.87	17.77	17.32	18.21	18.67	16.44	17.34	16.89	17.78	18.24
	8H	17.06	17.90	17.52	18.35	18.81	16.62	17.47	17.08	17.91	18.37
	12H	17.19	17.95	17.67	18.43	18.89	16.74	17.50	17.22	17.97	18.44
8H	4H	16.54	17.39	17.01	17.83	18.30	16.17	17.02	16.63	17.46	17.93
	6H	17.26	17.96	17.75	18.45	18.93	16.88	17.58	17.37	18.07	18.54
	8H	17.52	18.15	18.03	18.66	19.14	17.13	17.76	17.64	18.26	18.75
	12H	17.72	18.28	18.23	18.77	19.33	17.31	17.86	17.81	18.35	18.92
12H	4H	16.57	17.33	17.05	17.81	18.28	16.21	16.97	16.69	17.44	17.91
	6H	17.30	17.94	17.81	18.44	18.93	16.94	17.57	17.45	18.07	18.56
	8H	17.62	18.18	18.13	18.67	19.23	17.24	17.80	17.75	18.29	18.85