

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: P930319

Luminaire Tested: DFN2DS-HX4F0-070DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930319
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-HX4F0-070DS930-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

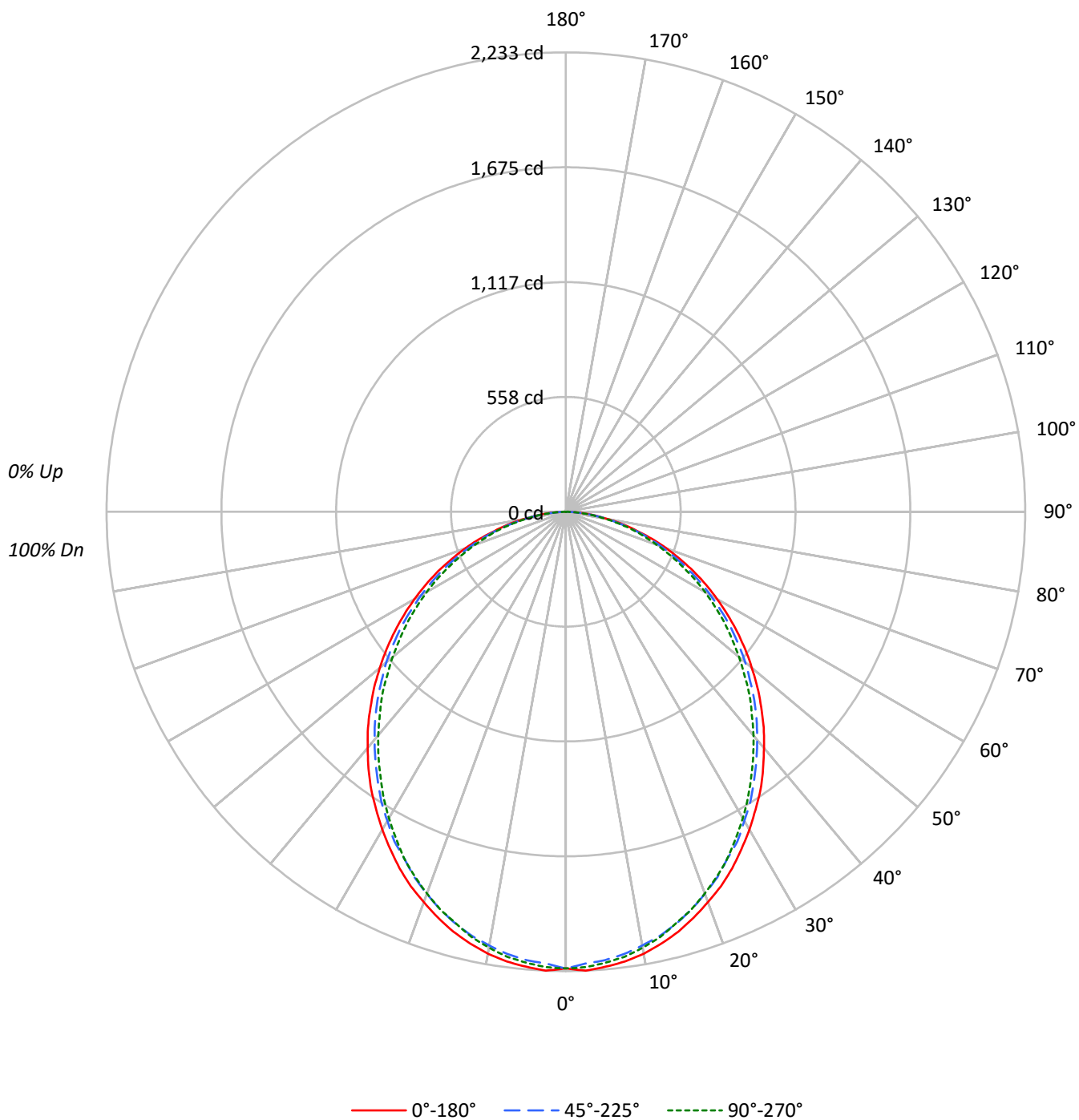
Lumens per Lamp: N/A
Luminaire Lumens: 5648.0 lumens
Efficiency: N/A
Efficacy: 79.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 71.1
Input Voltage (V):
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°	1651	1651	1651
5°	1657	1633	1643
10°	1647	1617	1625
15°	1627	1595	1594
20°	1598	1564	1562
25°	1569	1525	1525
30°	1532	1490	1477
35°	1498	1447	1426
40°	1455	1405	1378
45°	1412	1362	1329
50°	1365	1318	1272
55°	1317	1267	1220
60°	1263	1207	1162
65°	1206	1146	1093
70°	1132	1072	1021
75°	1030	987	963
80°	914	886	841
85°	746	712	637

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1412 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	13.02	14.63	13.39	14.95	15.26	12.58	14.19	12.94	14.50	14.82
	3H	14.77	16.23	15.15	16.56	16.92	14.28	15.74	14.66	16.06	16.42
	4H	15.42	16.79	15.82	17.14	17.51	14.93	16.29	15.32	16.64	17.02
	6H	15.89	17.16	16.30	17.52	17.91	15.39	16.66	15.80	17.02	17.41
	8H	16.03	17.24	16.46	17.63	18.03	15.53	16.74	15.95	17.13	17.53
	12H	16.12	17.28	16.55	17.66	18.09	15.61	16.77	16.04	17.15	17.58
4H	2H	13.58	14.95	13.98	15.30	15.68	13.23	14.60	13.63	14.95	15.32
	3H	15.56	16.71	15.97	17.10	17.50	15.15	16.30	15.56	16.70	17.10
	4H	16.34	17.37	16.77	17.79	18.22	15.91	16.95	16.34	17.36	17.80
	6H	16.93	17.84	17.39	18.28	18.73	16.50	17.40	16.95	17.85	18.30
	8H	17.12	17.97	17.58	18.41	18.88	16.68	17.53	17.14	17.97	18.44
	12H	17.25	18.01	17.73	18.49	18.96	16.80	17.56	17.28	18.04	18.51
8H	4H	16.61	17.46	17.07	17.90	18.36	16.23	17.08	16.70	17.52	17.99
	6H	17.32	18.03	17.82	18.51	18.99	16.94	17.64	17.44	18.13	18.61
	8H	17.58	18.21	18.09	18.72	19.21	17.19	17.82	17.70	18.33	18.81
	12H	17.78	18.34	18.29	18.83	19.39	17.37	17.93	17.88	18.42	18.98
12H	4H	16.64	17.39	17.12	17.87	18.34	16.27	17.03	16.75	17.51	17.98
	6H	17.37	18.00	17.88	18.51	18.99	17.00	17.63	17.51	18.14	18.62
	8H	17.68	18.24	18.19	18.73	19.29	17.31	17.86	17.81	18.35	18.91