

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: P930211

Luminaire Tested: DFN2DS-HX3F0-070DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930211
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-HX3F0-070DS930-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

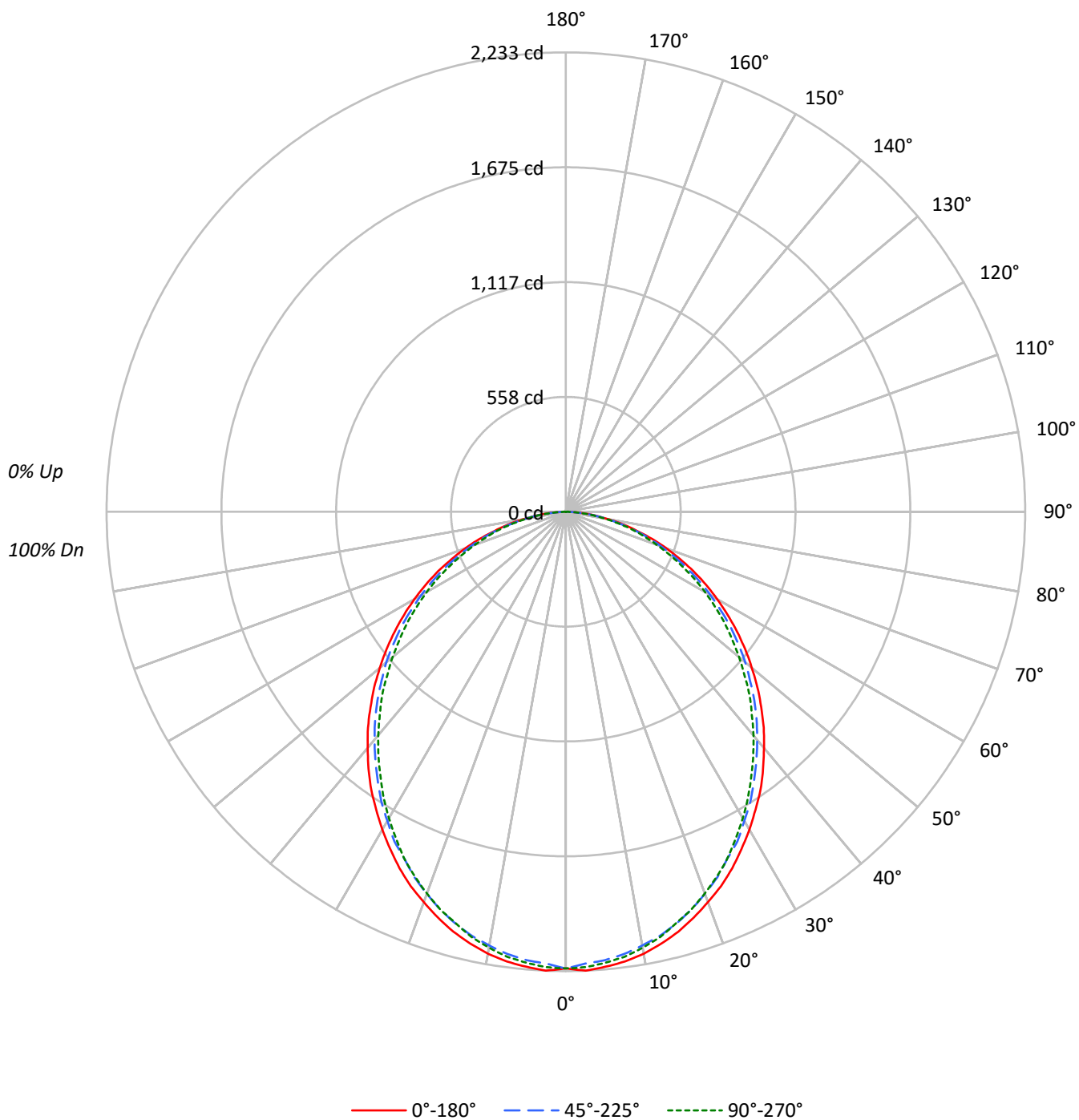
Lumens per Lamp: N/A
Luminaire Lumens: 5648.0 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 73.6
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°	2571	2571	2571
5°	2581	2544	2559
10°	2566	2518	2531
15°	2534	2485	2483
20°	2489	2437	2434
25°	2444	2376	2376
30°	2387	2321	2301
35°	2333	2255	2222
40°	2266	2188	2146
45°	2200	2122	2070
50°	2127	2054	1981
55°	2052	1974	1901
60°	1968	1880	1810
65°	1878	1785	1703
70°	1764	1670	1591
75°	1604	1537	1500
80°	1424	1381	1309
85°	1162	1108	993

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2200 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	14.56	16.17	14.93	16.49	16.80	14.12	15.73	14.48	16.04	16.36
	3H	16.31	17.77	16.69	18.10	18.46	15.82	17.28	16.20	17.60	17.96
	4H	16.96	18.33	17.36	18.68	19.05	16.47	17.83	16.86	18.18	18.56
	6H	17.43	18.70	17.84	19.06	19.45	16.93	18.20	17.34	18.56	18.95
	8H	17.57	18.78	18.00	19.17	19.57	17.07	18.28	17.49	18.67	19.07
	12H	17.66	18.82	18.09	19.20	19.63	17.15	18.31	17.58	18.69	19.12
4H	2H	15.12	16.49	15.52	16.84	17.22	14.77	16.14	15.17	16.49	16.86
	3H	17.10	18.25	17.51	18.64	19.04	16.69	17.84	17.10	18.24	18.64
	4H	17.88	18.91	18.31	19.33	19.76	17.45	18.49	17.88	18.90	19.34
	6H	18.47	19.38	18.93	19.82	20.27	18.04	18.94	18.49	19.39	19.84
	8H	18.66	19.51	19.12	19.95	20.42	18.22	19.07	18.68	19.51	19.98
	12H	18.79	19.55	19.27	20.03	20.50	18.34	19.10	18.82	19.58	20.05
8H	4H	18.15	19.00	18.61	19.44	19.90	17.78	18.62	18.24	19.06	19.53
	6H	18.86	19.57	19.36	20.05	20.53	18.48	19.19	18.98	19.67	20.15
	8H	19.12	19.75	19.63	20.26	20.75	18.73	19.36	19.24	19.87	20.35
	12H	19.32	19.88	19.83	20.37	20.93	18.91	19.47	19.42	19.96	20.52
12H	4H	18.18	18.94	18.66	19.41	19.88	17.81	18.57	18.29	19.05	19.52
	6H	18.91	19.54	19.42	20.05	20.53	18.54	19.17	19.05	19.68	20.17
	8H	19.22	19.78	19.73	20.27	20.83	18.85	19.40	19.35	19.89	20.45