

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: P930195

Luminaire Tested: DFN2DS-HX3F0-060DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930195
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-HX3F0-060DS935-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

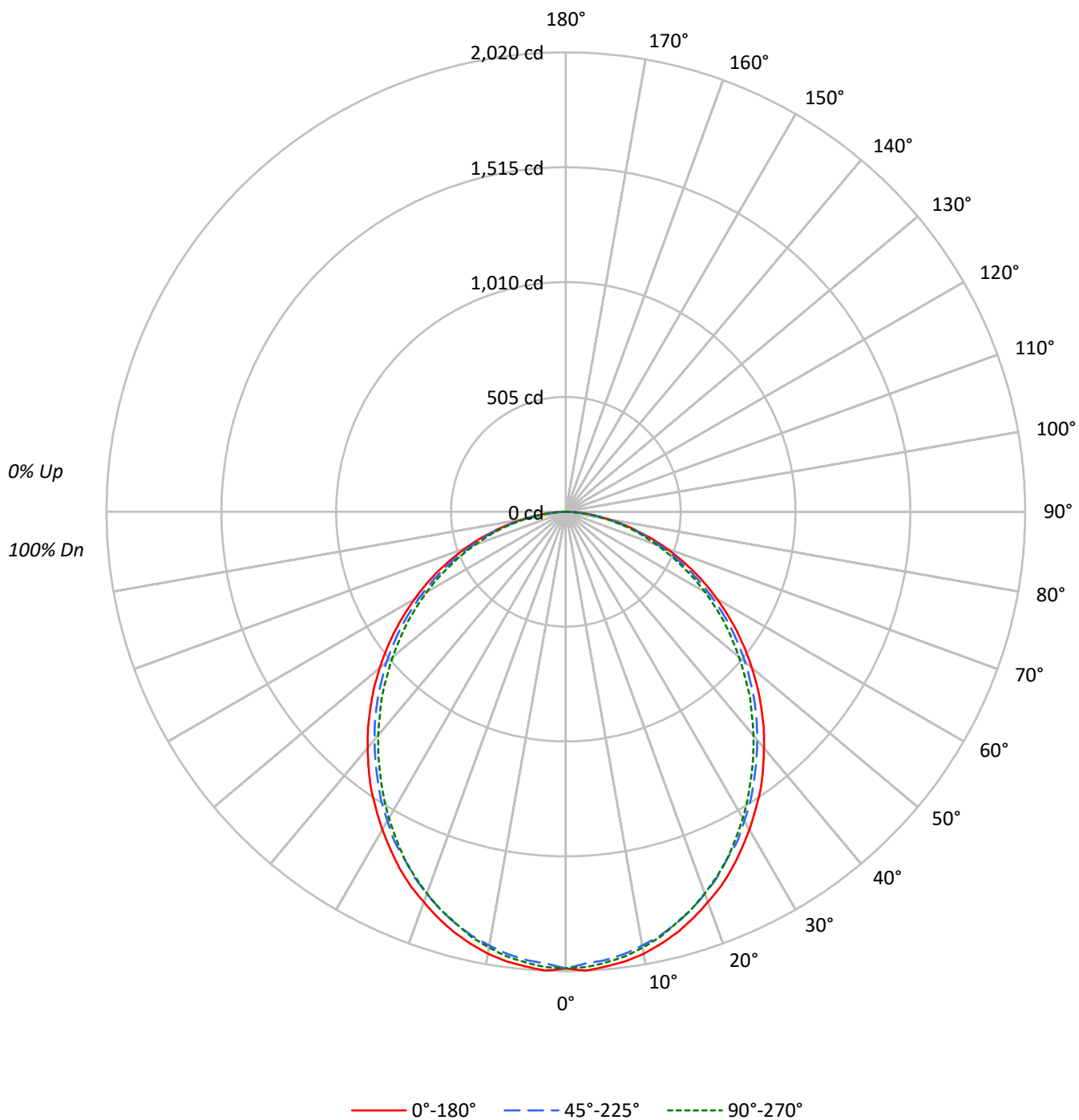
Lumens per Lamp: N/A
Luminaire Lumens: 5108.4 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 61.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
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°	2326	2326	2326
5°	2335	2301	2315
10°	2321	2278	2289
15°	2292	2248	2246
20°	2251	2204	2202
25°	2211	2149	2149
30°	2159	2100	2081
35°	2110	2039	2009
40°	2050	1979	1941
45°	1990	1920	1872
50°	1924	1858	1792
55°	1856	1786	1720
60°	1780	1700	1637
65°	1699	1614	1540
70°	1596	1510	1439
75°	1451	1391	1357
80°	1289	1249	1185
85°	1050	1001	898

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1990 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.0	3.7
10°-20°	531.7	10.4
20°-30°	781.4	15.3
30°-40°	907.5	17.8
40°-50°	906.4	17.7
50°-60°	790.4	15.5
60°-70°	584.3	11.4
70°-80°	330.6	6.5
80°-90°	87.2	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°	1502.1	29.4
0°-40°	2409.6	47.2
0°-60°	4106.3	80.4
0°-90°	5108.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5108.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2008	2008	2008	2008	2008	
5°	2008	2000	1979	1994	1991	191
15°	1911	1900	1875	1882	1873	538
25°	1730	1714	1682	1685	1682	796
35°	1492	1473	1442	1430	1421	932
45°	1214	1201	1172	1151	1143	937
55°	919	907	884	861	852	822
65°	620	608	589	572	562	613
75°	324	321	311	299	303	346
85°	79	77	75	69	68	93
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2007.8	2007.8	2007.8	2007.8	2007.8
2.5°	2019.5	2009.8	1988.5	2007.8	2004.1
5°	2007.8	2000.2	1978.9	1994.3	1990.6
7.5°	1994.3	1982.8	1961.5	1977.1	1973.2
10°	1973.2	1959.7	1936.5	1951.9	1946.1
12.5°	1944.1	1932.6	1909.5	1919.1	1915.2
15°	1911.3	1899.8	1874.6	1882.5	1872.8
17.5°	1870.8	1859.3	1834.1	1843.7	1834.1
20°	1826.3	1814.9	1787.8	1793.5	1786.0
22.5°	1782.1	1764.6	1739.4	1739.4	1735.6
25°	1729.8	1714.5	1681.6	1685.3	1681.6
27.5°	1671.8	1658.3	1633.3	1627.6	1618.0
30°	1614.1	1598.5	1569.7	1563.9	1556.1
32.5°	1552.2	1540.8	1509.8	1498.1	1490.4
35°	1492.4	1473.2	1442.2	1430.5	1420.9
37.5°	1424.8	1407.4	1376.5	1362.9	1353.3
40°	1355.4	1339.8	1308.9	1291.7	1283.9
42.5°	1287.8	1272.2	1241.5	1222.1	1210.5
45°	1214.5	1200.9	1171.8	1150.8	1142.9
47.5°	1142.9	1129.4	1098.6	1077.2	1065.7
50°	1067.6	1058.0	1031.0	1003.9	994.2
52.5°	994.2	980.7	955.7	934.5	921.0
55°	919.1	907.4	884.3	861.1	851.5
57.5°	843.7	834.1	808.9	785.8	778.0
60°	768.3	760.8	733.8	712.4	706.7
62.5°	695.0	681.5	662.2	642.9	635.2
65°	619.8	608.2	588.9	571.5	561.8
67.5°	542.6	532.8	515.6	502.1	494.2
70°	471.1	463.4	445.9	432.4	424.8
72.5°	397.8	390.0	380.4	366.9	361.1
75°	324.2	320.6	310.7	299.3	303.2
77.5°	258.7	250.9	247.0	241.3	235.6
80°	193.2	191.1	187.2	181.5	177.6
82.5°	131.3	131.3	129.4	121.7	121.7
85°	79.0	77.2	75.3	69.4	67.6
87.5°	34.8	31.0	27.0	21.3	19.3
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	14.22	15.83	14.58	16.14	16.45	13.77	15.38	14.14	15.70	16.01
	3H	15.97	17.42	16.34	17.75	18.11	15.47	16.93	15.85	17.26	17.62
	4H	16.61	17.98	17.01	18.33	18.70	16.12	17.49	16.52	17.83	18.21
	6H	17.08	18.35	17.49	18.71	19.10	16.58	17.85	16.99	18.21	18.60
	8H	17.22	18.43	17.65	18.82	19.22	16.72	17.93	17.15	18.32	18.72
	12H	17.31	18.47	17.74	18.86	19.28	16.80	17.96	17.23	18.34	18.77
4H	2H	14.78	16.14	15.17	16.49	16.87	14.42	15.79	14.82	16.14	16.52
	3H	16.75	17.90	17.16	18.29	18.69	16.34	17.49	16.75	17.89	18.29
	4H	17.53	18.56	17.96	18.98	19.41	17.10	18.14	17.53	18.55	18.99
	6H	18.12	19.03	18.58	19.47	19.93	17.69	18.60	18.15	19.04	19.49
	8H	18.31	19.16	18.77	19.60	20.07	17.88	18.72	18.34	19.16	19.63
	12H	18.45	19.20	18.93	19.68	20.15	17.99	18.75	18.47	19.23	19.70
8H	4H	17.80	18.65	18.26	19.09	19.55	17.43	18.27	17.89	18.72	19.18
	6H	18.51	19.22	19.01	19.71	20.18	18.13	18.84	18.63	19.32	19.80
	8H	18.77	19.40	19.28	19.91	20.40	18.38	19.01	18.89	19.52	20.01
	12H	18.97	19.53	19.48	20.02	20.58	18.56	19.12	19.07	19.61	20.17
12H	4H	17.83	18.59	18.31	19.06	19.53	17.46	18.22	17.94	18.70	19.17
	6H	18.56	19.19	19.07	19.70	20.18	18.19	18.82	18.70	19.33	19.82
	8H	18.87	19.43	19.38	19.92	20.48	18.50	19.05	19.00	19.54	20.11