

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: P930181

Luminaire Tested: DFN2DS-HX3F0-050DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930181
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-HX3F0-050DS950-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

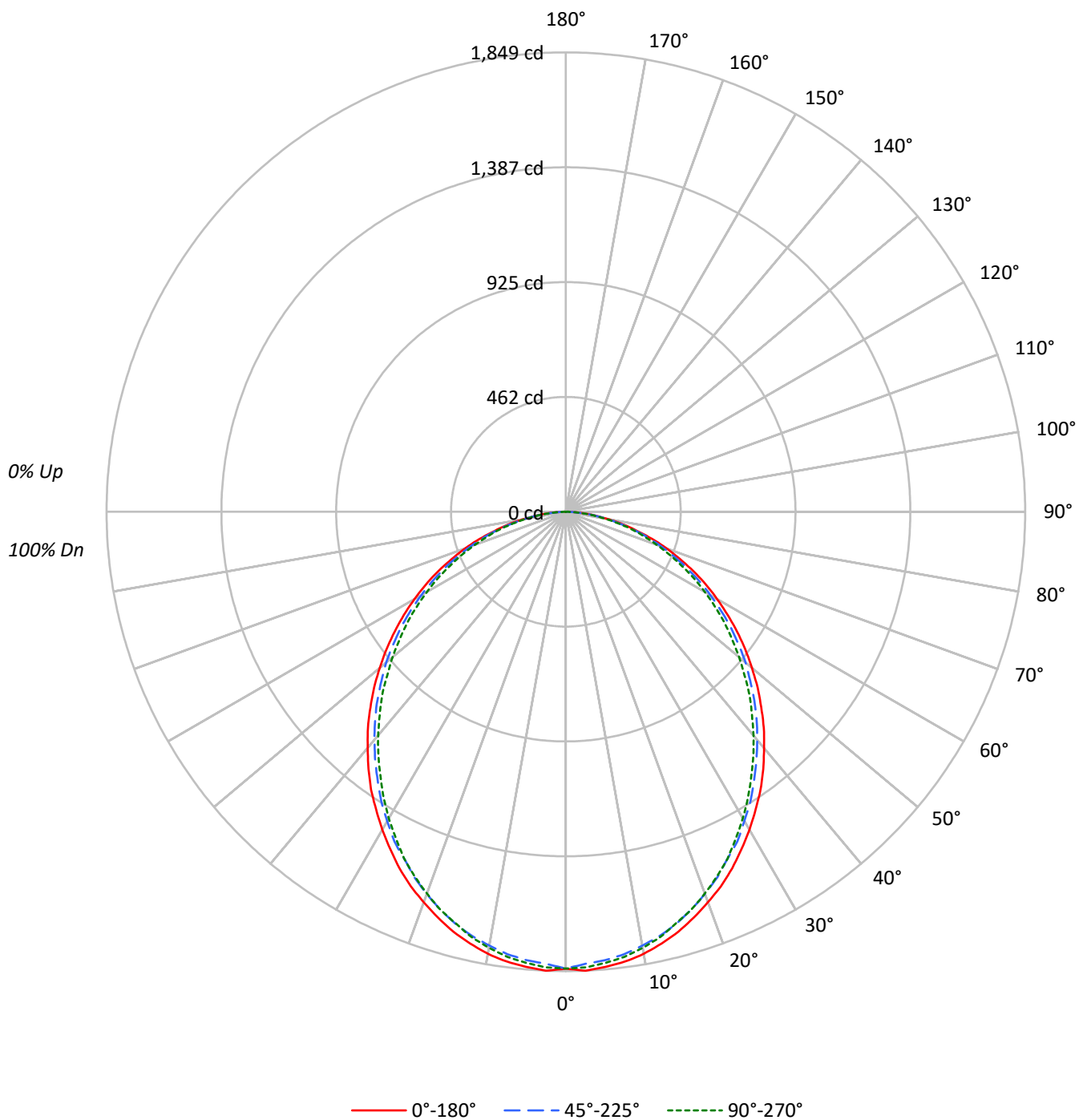
Lumens per Lamp: N/A
Luminaire Lumens: 4677.7 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 49.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
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°	2130	2130	2130
5°	2138	2107	2120
10°	2125	2086	2096
15°	2099	2059	2057
20°	2062	2018	2016
25°	2025	1968	1968
30°	1977	1922	1906
35°	1932	1867	1840
40°	1877	1812	1778
45°	1822	1758	1714
50°	1762	1701	1641
55°	1700	1635	1575
60°	1630	1557	1499
65°	1556	1478	1410
70°	1461	1383	1318
75°	1329	1273	1242
80°	1180	1143	1085
85°	962	917	823

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1822 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.0	3.7
10°-20°	486.9	10.4
20°-30°	715.5	15.3
30°-40°	831.0	17.8
40°-50°	830.0	17.7
50°-60°	723.7	15.5
60°-70°	535.0	11.4
70°-80°	302.7	6.5
80°-90°	79.9	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°	1375.4	29.4
0°-40°	2206.5	47.2
0°-60°	3760.2	80.4
0°-90°	4677.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4677.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1838	1838	1838	1838	1838	
5°	1838	1832	1812	1826	1823	175
15°	1750	1740	1717	1724	1715	493
25°	1584	1570	1540	1543	1540	729
35°	1367	1349	1321	1310	1301	853
45°	1112	1100	1073	1054	1047	858
55°	842	831	810	788	780	752
65°	568	557	539	523	514	561
75°	297	294	284	274	278	317
85°	72	71	69	64	62	85
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1838.5	1838.5	1838.5	1838.5	1838.5
2.5°	1849.2	1840.4	1820.9	1838.5	1835.2
5°	1838.5	1831.6	1812.0	1826.1	1822.8
7.5°	1826.1	1815.6	1796.2	1810.4	1806.8
10°	1806.8	1794.5	1773.3	1787.3	1782.1
12.5°	1780.2	1769.7	1748.5	1757.3	1753.7
15°	1750.1	1739.7	1716.6	1723.8	1714.9
17.5°	1713.0	1702.5	1679.5	1688.2	1679.5
20°	1672.4	1661.9	1637.1	1642.3	1635.4
22.5°	1631.8	1615.9	1592.8	1592.8	1589.2
25°	1584.0	1569.9	1539.9	1543.3	1539.9
27.5°	1530.9	1518.5	1495.7	1490.4	1481.6
30°	1478.0	1463.8	1437.3	1432.1	1425.0
32.5°	1421.4	1410.9	1382.5	1371.9	1364.8
35°	1366.6	1349.0	1320.6	1310.0	1301.2
37.5°	1304.7	1288.8	1260.4	1248.1	1239.3
40°	1241.2	1226.9	1198.5	1182.8	1175.7
42.5°	1179.3	1165.0	1136.8	1119.0	1108.5
45°	1112.1	1099.7	1073.0	1053.8	1046.6
47.5°	1046.6	1034.2	1006.0	986.4	975.9
50°	977.6	968.8	944.1	919.3	910.4
52.5°	910.4	898.0	875.2	855.7	843.3
55°	841.6	830.9	809.7	788.5	779.7
57.5°	772.5	763.7	740.7	719.5	712.3
60°	703.6	696.7	671.9	652.3	647.1
62.5°	636.5	624.1	606.4	588.7	581.6
65°	567.6	556.9	539.2	523.3	514.5
67.5°	496.9	487.9	472.1	459.7	452.6
70°	431.4	424.3	408.3	396.0	389.1
72.5°	364.3	357.1	348.3	335.9	330.7
75°	296.9	293.5	284.5	274.0	277.6
77.5°	236.9	229.7	226.2	220.9	215.7
80°	176.9	175.0	171.4	166.2	162.6
82.5°	120.2	120.2	118.5	111.4	111.4
85°	72.4	70.7	69.0	63.6	61.9
87.5°	31.8	28.4	24.8	19.5	17.7
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	13.91	15.52	14.27	15.83	16.15	13.46	15.08	13.83	15.39	15.70
	3H	15.66	17.11	16.04	17.44	17.80	15.17	16.62	15.55	16.95	17.31
	4H	16.31	17.67	16.70	18.02	18.40	15.81	17.18	16.21	17.53	17.90
	6H	16.77	18.04	17.19	18.41	18.80	16.27	17.54	16.68	17.91	18.30
	8H	16.92	18.13	17.34	18.52	18.92	16.41	17.63	16.84	18.01	18.41
	12H	17.01	18.17	17.44	18.55	18.98	16.50	17.66	16.93	18.04	18.47
4H	2H	14.47	15.84	14.87	16.19	16.56	14.12	15.49	14.51	15.83	16.21
	3H	16.44	17.59	16.85	17.99	18.39	16.04	17.18	16.45	17.58	17.98
	4H	17.22	18.26	17.65	18.67	19.11	16.80	17.83	17.23	18.25	18.68
	6H	17.82	18.72	18.27	19.16	19.62	17.39	18.29	17.84	18.73	19.19
	8H	18.01	18.85	18.47	19.30	19.76	17.57	18.42	18.03	18.86	19.32
	12H	18.14	18.90	18.62	19.37	19.84	17.69	18.45	18.17	18.92	19.39
8H	4H	17.49	18.34	17.95	18.78	19.25	17.12	17.97	17.58	18.41	18.87
	6H	18.21	18.91	18.70	19.40	19.88	17.83	18.53	18.32	19.02	19.49
	8H	18.47	19.10	18.98	19.61	20.09	18.08	18.71	18.59	19.21	19.70
	12H	18.67	19.23	19.17	19.72	20.28	18.25	18.81	18.76	19.30	19.86
12H	4H	17.52	18.28	18.00	18.76	19.23	17.16	17.92	17.64	18.39	18.86
	6H	18.25	18.89	18.76	19.39	19.88	17.89	18.52	18.39	19.02	19.51
	8H	18.57	19.13	19.07	19.62	20.18	18.19	18.75	18.70	19.24	19.80