

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: P930165

Luminaire Tested: DFN2DS-HX3F0-050DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930165
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-HX3F0-050DS830-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

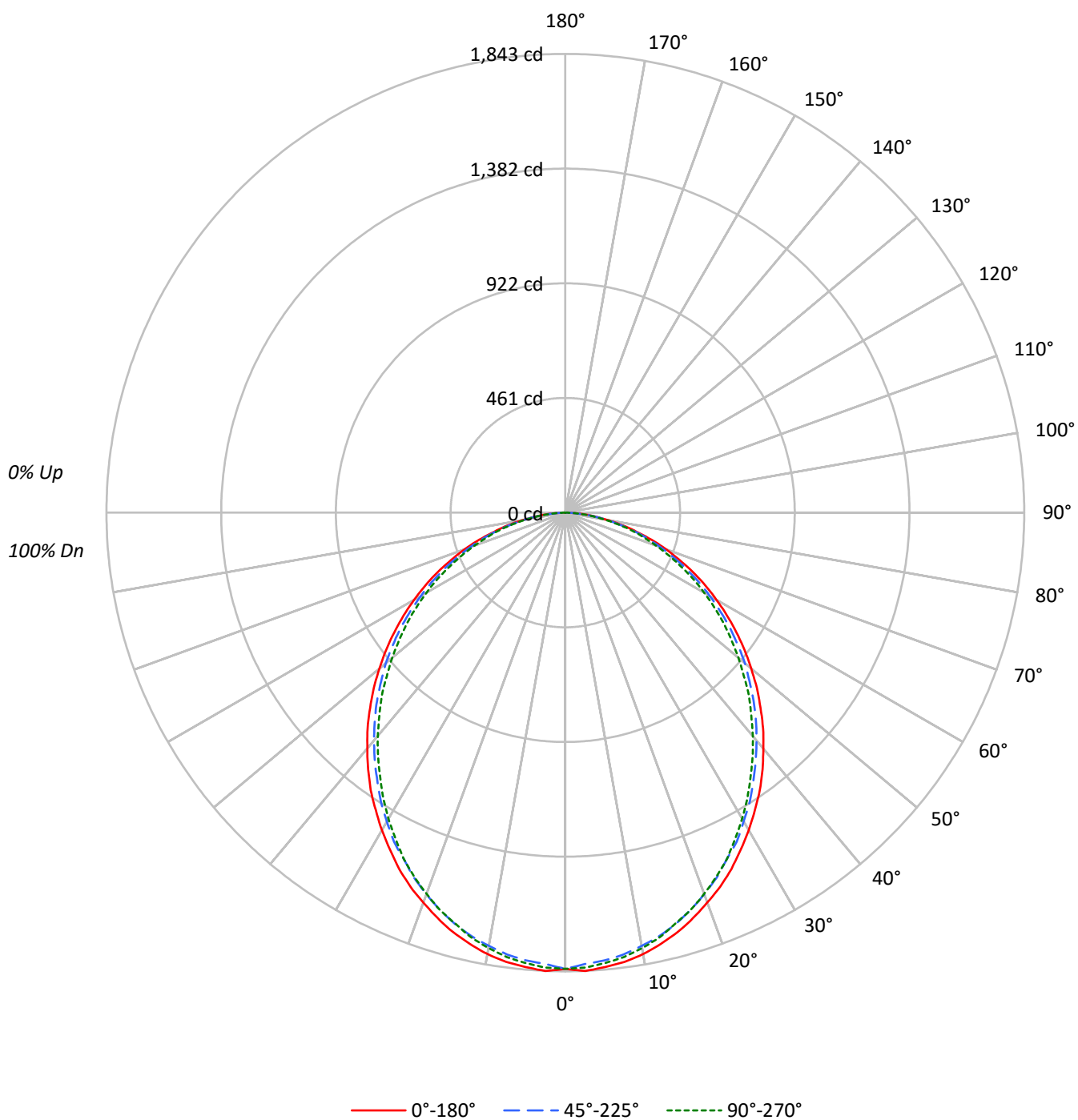
Lumens per Lamp: N/A
Luminaire Lumens: 4662.9 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

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°	2123	2123	2123
5°	2131	2100	2113
10°	2118	2079	2089
15°	2092	2052	2050
20°	2055	2012	2010
25°	2018	1962	1962
30°	1971	1916	1900
35°	1926	1862	1834
40°	1871	1807	1772
45°	1816	1752	1709
50°	1756	1696	1635
55°	1694	1630	1570
60°	1625	1552	1495
65°	1551	1473	1406
70°	1456	1378	1313
75°	1325	1269	1239
80°	1176	1140	1081
85°	960	914	820

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1816 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.5	3.7
10°-20°	485.3	10.4
20°-30°	713.2	15.3
30°-40°	828.4	17.8
40°-50°	827.4	17.7
50°-60°	721.4	15.5
60°-70°	533.3	11.4
70°-80°	301.7	6.5
80°-90°	79.6	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°	1371.1	29.4
0°-40°	2199.4	47.2
0°-60°	3748.2	80.4
0°-90°	4662.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4662.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1833	1833	1833	1833	1833	
5°	1833	1826	1806	1820	1817	174
15°	1745	1734	1711	1718	1709	491
25°	1579	1565	1535	1538	1535	727
35°	1362	1345	1316	1306	1297	851
45°	1108	1096	1070	1050	1043	856
55°	839	828	807	786	777	750
65°	566	555	538	522	513	559
75°	296	293	284	273	277	316
85°	72	70	69	63	62	85
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1832.7	1832.7	1832.7	1832.7	1832.7
2.5°	1843.3	1834.5	1815.1	1832.7	1829.4
5°	1832.7	1825.8	1806.3	1820.3	1817.0
7.5°	1820.3	1809.9	1790.5	1804.7	1801.1
10°	1801.1	1788.8	1767.7	1781.6	1776.4
12.5°	1774.5	1764.1	1743.0	1751.7	1748.2
15°	1744.6	1734.1	1711.1	1718.3	1709.4
17.5°	1707.6	1697.1	1674.1	1682.9	1674.1
20°	1667.1	1656.6	1631.9	1637.1	1630.2
22.5°	1626.6	1610.7	1587.7	1587.7	1584.2
25°	1579.0	1564.9	1535.0	1538.4	1535.0
27.5°	1526.0	1513.7	1490.9	1485.6	1476.9
30°	1473.3	1459.2	1432.8	1427.5	1420.4
32.5°	1416.9	1406.4	1378.1	1367.5	1360.4
35°	1362.2	1344.7	1316.4	1305.8	1297.0
37.5°	1300.5	1284.7	1256.4	1244.1	1235.3
40°	1237.2	1223.0	1194.7	1179.0	1171.9
42.5°	1175.5	1161.3	1133.2	1115.4	1105.0
45°	1108.5	1096.2	1069.6	1050.4	1043.3
47.5°	1043.3	1030.9	1002.8	983.3	972.8
50°	974.5	965.7	941.1	916.4	907.5
52.5°	907.5	895.2	872.4	853.0	840.6
55°	838.9	828.3	807.1	786.0	777.2
57.5°	770.1	761.3	738.3	717.2	710.1
60°	701.3	694.4	669.8	650.3	645.1
62.5°	634.4	622.1	604.5	586.9	579.8
65°	565.8	555.1	537.5	521.7	512.8
67.5°	495.3	486.4	470.6	458.3	451.1
70°	430.0	423.0	407.0	394.7	387.8
72.5°	363.1	356.0	347.2	334.9	329.6
75°	296.0	292.6	283.6	273.2	276.8
77.5°	236.2	229.0	225.5	220.2	215.1
80°	176.3	174.5	170.9	165.7	162.1
82.5°	119.8	119.8	118.1	111.1	111.1
85°	72.2	70.5	68.8	63.4	61.7
87.5°	31.7	28.3	24.7	19.4	17.6
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	13.90	15.51	14.26	15.82	16.14	13.45	15.06	13.82	15.38	15.69
	3H	15.65	17.10	16.03	17.43	17.79	15.16	16.61	15.53	16.94	17.30
	4H	16.29	17.66	16.69	18.01	18.39	15.80	17.17	16.20	17.52	17.89
	6H	16.76	18.03	17.17	18.40	18.79	16.26	17.53	16.67	17.90	18.29
	8H	16.91	18.12	17.33	18.51	18.91	16.40	17.61	16.83	18.00	18.40
	12H	17.00	18.16	17.43	18.54	18.97	16.49	17.65	16.91	18.03	18.46
4H	2H	14.46	15.83	14.86	16.17	16.55	14.11	15.47	14.50	15.82	16.20
	3H	16.43	17.58	16.84	17.98	18.38	16.03	17.17	16.44	17.57	17.97
	4H	17.21	18.25	17.64	18.66	19.10	16.79	17.82	17.22	18.24	18.67
	6H	17.81	18.71	18.26	19.15	19.61	17.37	18.28	17.83	18.72	19.18
	8H	18.00	18.84	18.46	19.28	19.75	17.56	18.40	18.02	18.85	19.31
	12H	18.13	18.89	18.61	19.36	19.83	17.68	18.44	18.16	18.91	19.38
8H	4H	17.48	18.33	17.94	18.77	19.24	17.11	17.96	17.57	18.40	18.86
	6H	18.20	18.90	18.69	19.39	19.86	17.82	18.52	18.31	19.01	19.48
	8H	18.46	19.09	18.97	19.59	20.08	18.07	18.70	18.58	19.20	19.69
	12H	18.66	19.21	19.16	19.71	20.27	18.24	18.80	18.75	19.29	19.85
12H	4H	17.51	18.27	17.99	18.75	19.21	17.14	17.90	17.62	18.38	18.85
	6H	18.24	18.88	18.75	19.38	19.87	17.87	18.51	18.38	19.01	19.50
	8H	18.56	19.11	19.06	19.61	20.17	18.18	18.74	18.69	19.23	19.79