

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: P930171

Luminaire Tested: DFN2DS-HX3F0-050DS850-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930171
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-HX3F0-050DS850-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

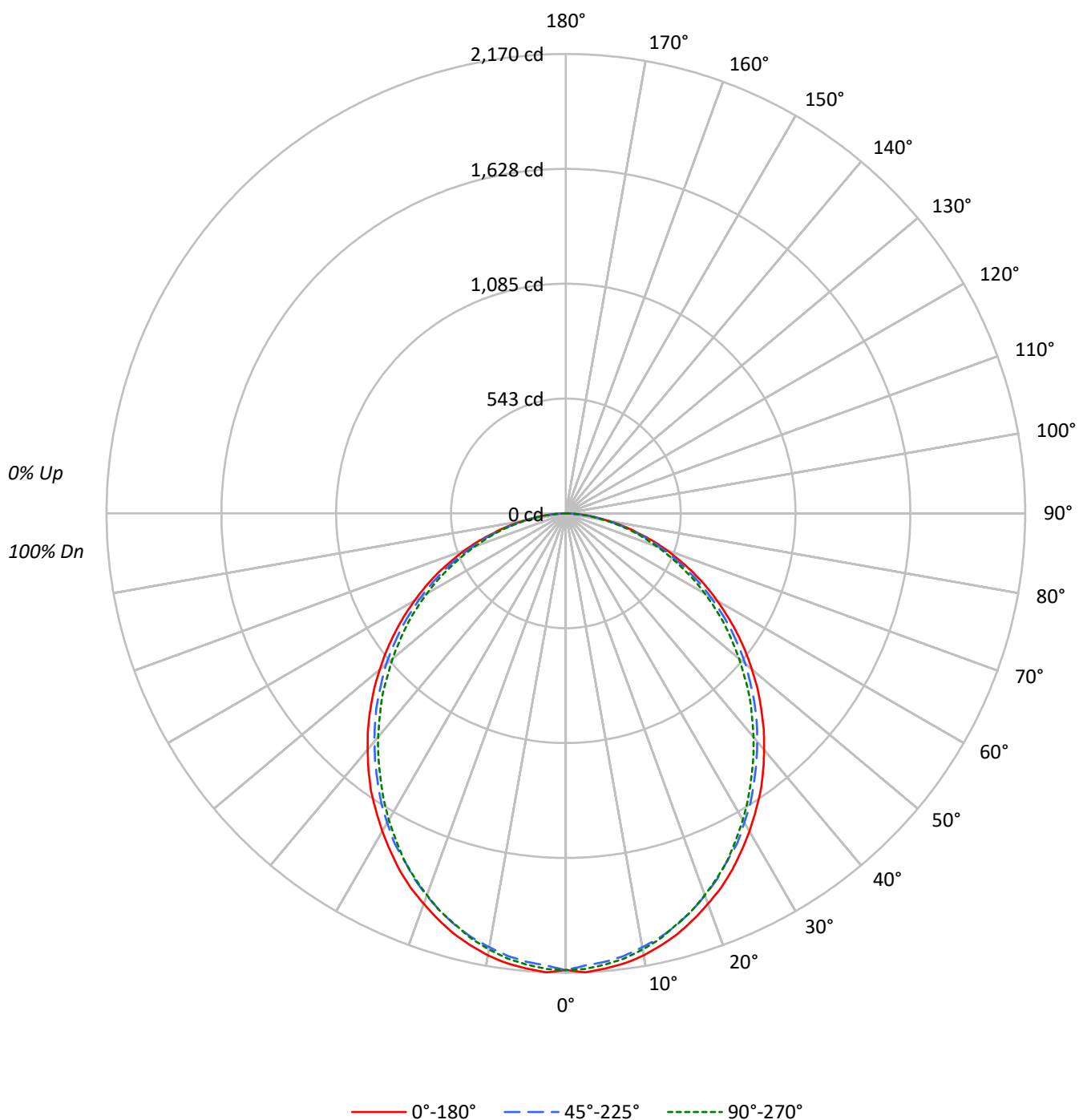
Lumens per Lamp: N/A
Luminaire Lumens: 5489.6 lumens
Efficiency: N/A
Efficacy: 111.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P930171

CATALOG NUMBER: DFN2DS-HX3F0-050DS850-FLL

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°	2499	2499	2499
5°	2509	2473	2487
10°	2494	2448	2460
15°	2463	2416	2413
20°	2419	2368	2366
25°	2376	2310	2310
30°	2320	2256	2237
35°	2268	2192	2159
40°	2203	2127	2086
45°	2138	2063	2012
50°	2068	1997	1925
55°	1995	1919	1848
60°	1913	1827	1759
65°	1826	1734	1655
70°	1715	1623	1546
75°	1559	1494	1458
80°	1385	1342	1273
85°	1128	1077	965

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2138 cd/sqm

TEST NUMBER: P930171

CATALOG NUMBER: DFN2DS-HX3F0-050DS850-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.1	3.7
10°-20°	571.4	10.4
20°-30°	839.7	15.3
30°-40°	975.2	17.8
40°-50°	974.0	17.7
50°-60°	849.3	15.5
60°-70°	627.9	11.4
70°-80°	355.2	6.5
80°-90°	93.8	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°	1614.1	29.4
0°-40°	2589.4	47.2
0°-60°	4412.7	80.4
0°-90°	5489.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5489.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2158	2158	2158	2158	2158	
5°	2158	2150	2126	2143	2139	205
15°	2054	2042	2014	2023	2012	578
25°	1859	1842	1807	1811	1807	855
35°	1604	1583	1550	1537	1527	1001
45°	1305	1290	1259	1237	1228	1007
55°	988	975	950	925	915	883
65°	666	654	633	614	604	659
75°	348	344	334	322	326	372
85°	85	83	81	75	73	100
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-HX3F0-050DS850-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2157.6	2157.6	2157.6	2157.6	2157.6
2.5°	2170.1	2159.8	2136.9	2157.6	2153.7
5°	2157.6	2149.5	2126.5	2143.0	2139.2
7.5°	2143.0	2130.7	2107.9	2124.6	2120.4
10°	2120.4	2105.9	2081.0	2097.5	2091.4
12.5°	2089.1	2076.8	2052.0	2062.3	2058.1
15°	2053.9	2041.6	2014.5	2022.9	2012.5
17.5°	2010.3	1998.0	1970.9	1981.2	1970.9
20°	1962.6	1950.3	1921.2	1927.3	1919.2
22.5°	1915.0	1896.3	1869.2	1869.2	1865.0
25°	1858.9	1842.4	1807.1	1811.1	1807.1
27.5°	1796.6	1782.1	1755.2	1749.0	1738.7
30°	1734.5	1717.8	1686.8	1680.6	1672.3
32.5°	1668.0	1655.7	1622.5	1609.9	1601.6
35°	1603.7	1583.1	1549.8	1537.3	1527.0
37.5°	1531.1	1512.5	1479.2	1464.7	1454.3
40°	1456.6	1439.8	1406.5	1388.0	1379.7
42.5°	1383.9	1367.2	1334.1	1313.2	1300.9
45°	1305.1	1290.5	1259.3	1236.6	1228.2
47.5°	1228.2	1213.7	1180.5	1157.6	1145.3
50°	1147.3	1136.9	1107.9	1078.8	1068.4
52.5°	1068.4	1053.9	1027.0	1004.2	989.7
55°	987.7	975.1	950.2	925.3	915.0
57.5°	906.6	896.3	869.2	844.4	836.0
60°	825.7	817.6	788.5	765.5	759.4
62.5°	746.9	732.4	711.6	690.9	682.6
65°	666.1	653.5	632.8	614.2	603.7
67.5°	583.1	572.6	554.1	539.5	531.1
70°	506.3	497.9	479.2	464.7	456.6
72.5°	427.5	419.1	408.8	394.2	388.0
75°	348.4	344.5	333.9	321.6	325.8
77.5°	278.0	269.6	265.5	259.3	253.2
80°	207.6	205.4	201.2	195.1	190.9
82.5°	141.1	141.1	139.1	130.8	130.8
85°	84.9	83.0	81.0	74.6	72.6
87.5°	37.4	33.3	29.1	22.8	20.7
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	14.46	16.08	14.83	16.39	16.70	14.02	15.63	14.39	15.95	16.26
	3H	16.22	17.67	16.59	18.00	18.36	15.72	17.18	16.10	17.51	17.87
	4H	16.86	18.23	17.26	18.58	18.95	16.37	17.74	16.77	18.08	18.46
	6H	17.33	18.60	17.74	18.96	19.35	16.83	18.10	17.24	18.46	18.85
	8H	17.47	18.68	17.90	19.07	19.47	16.97	18.18	17.40	18.57	18.97
	12H	17.56	18.72	17.99	19.11	19.53	17.05	18.21	17.48	18.59	19.02
4H	2H	15.03	16.39	15.42	16.74	17.12	14.67	16.04	15.07	16.39	16.77
	3H	17.00	18.15	17.41	18.54	18.94	16.59	17.74	17.00	18.14	18.54
	4H	17.78	18.81	18.21	19.23	19.66	17.35	18.39	17.78	18.80	19.24
	6H	18.37	19.28	18.83	19.72	20.18	17.94	18.85	18.40	19.29	19.74
	8H	18.56	19.41	19.02	19.85	20.32	18.13	18.97	18.59	19.41	19.88
	12H	18.69	19.45	19.18	19.93	20.40	18.24	19.00	18.72	19.48	19.95
8H	4H	18.05	18.90	18.51	19.34	19.80	17.68	18.52	18.14	18.97	19.43
	6H	18.76	19.47	19.26	19.96	20.43	18.38	19.09	18.88	19.57	20.05
	8H	19.02	19.65	19.53	20.16	20.65	18.63	19.26	19.14	19.77	20.26
	12H	19.22	19.78	19.73	20.27	20.83	18.81	19.37	19.32	19.86	20.42
12H	4H	18.08	18.84	18.56	19.31	19.78	17.71	18.47	18.19	18.95	19.42
	6H	18.81	19.44	19.32	19.95	20.43	18.44	19.07	18.95	19.58	20.07
	8H	19.12	19.68	19.63	20.17	20.73	18.75	19.30	19.25	19.79	20.36