

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: P930294

Luminaire Tested: DFN2DS-HX4F0-060DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930294
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-HX4F0-060DS835-RLL
Description: 4 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

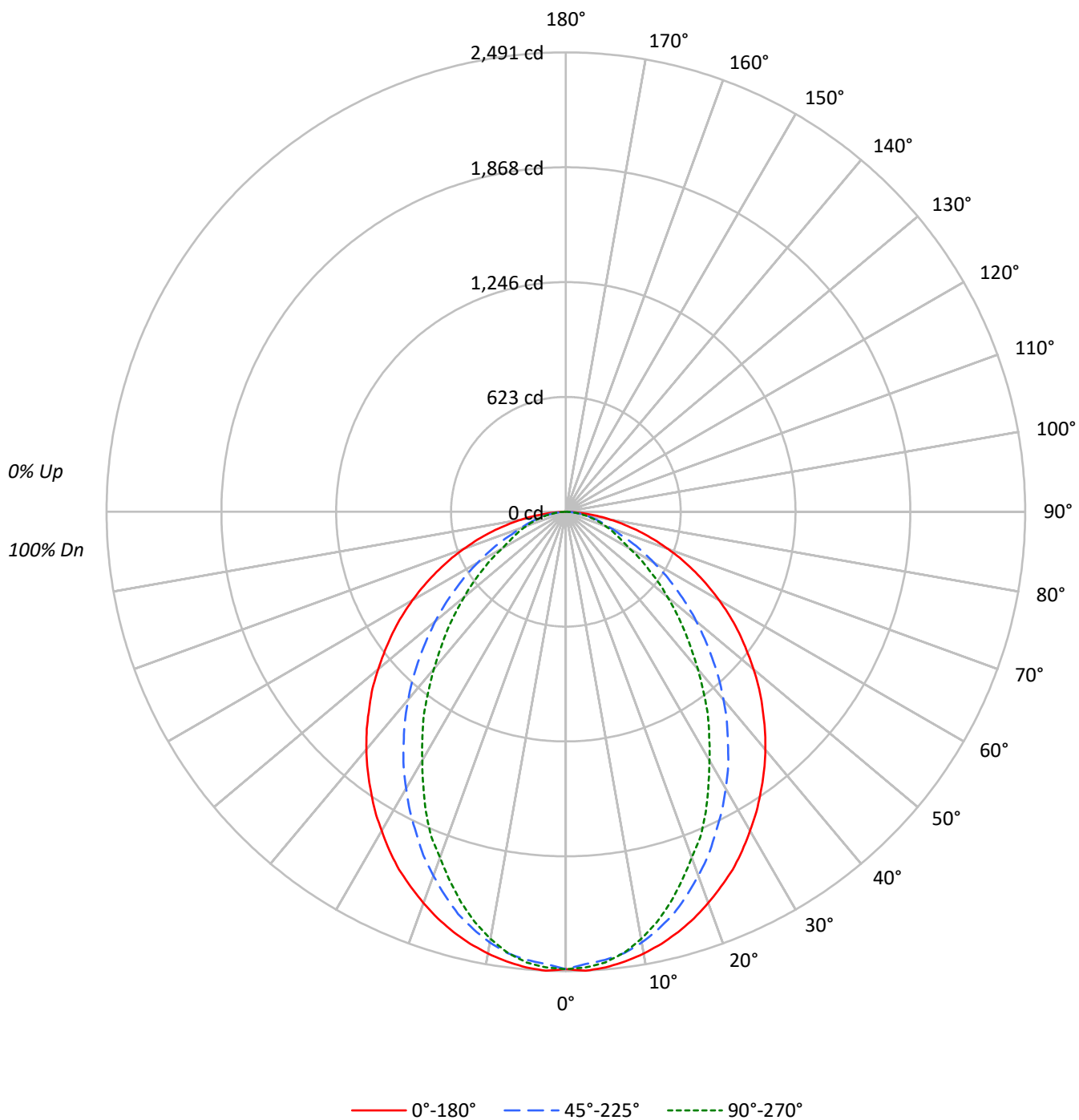
Lumens per Lamp: N/A
Luminaire Lumens: 5100.0 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 59
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930294

CATALOG NUMBER: DFN2DS-HX4F0-060DS835-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930294

CATALOG NUMBER: DFN2DS-HX4F0-060DS835-RLL

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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1844	1844	1844
5°	1851	1821	1831
10°	1837	1791	1776
15°	1816	1738	1688
20°	1786	1662	1579
25°	1757	1576	1473
30°	1715	1487	1337
35°	1675	1391	1218
40°	1634	1292	1080
45°	1586	1180	956
50°	1537	1067	833
55°	1487	945	716
60°	1428	818	594
65°	1362	687	541
70°	1283	566	497
75°	1186	516	465
80°	1047	461	423
85°	822	363	363

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1586 cd/sqm

TEST NUMBER: P930294

CATALOG NUMBER: DFN2DS-HX4F0-060DS835-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.4	4.6
10°-20°	638.0	12.5
20°-30°	895.7	17.6
30°-40°	976.4	19.1
40°-50°	897.4	17.6
50°-60°	704.8	13.8
60°-70°	458.8	9.0
70°-80°	236.1	4.6
80°-90°	60.3	1.2
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°	1766.2	34.6
0°-40°	2742.6	53.8
0°-60°	4344.8	85.2
0°-90°	5100.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5100.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2480	2480	2480	2480	2480	
5°	2480	2469	2439	2460	2453	235
15°	2359	2334	2258	2215	2193	665
25°	2141	2069	1921	1829	1795	985
35°	1845	1730	1533	1391	1342	1155
45°	1508	1358	1122	963	909	1165
55°	1147	972	729	595	552	1025
65°	774	592	390	314	307	768
75°	413	256	180	164	162	437
85°	96	49	43	43	43	116
90°	0	0	0	0	0	

TEST NUMBER: P930294

CATALOG NUMBER: DFN2DS-HX4F0-060DS835-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2479.8	2479.8	2479.8	2479.8	2479.8
2.5°	2491.0	2479.8	2455.0	2477.6	2473.1
5°	2479.8	2468.6	2439.3	2459.6	2452.9
7.5°	2459.6	2446.2	2414.8	2423.6	2412.4
10°	2432.6	2416.9	2372.2	2365.3	2351.9
12.5°	2399.1	2378.8	2318.1	2304.8	2280.0
15°	2358.6	2333.8	2257.6	2215.0	2192.6
17.5°	2311.5	2275.5	2181.2	2131.9	2096.0
20°	2257.6	2212.6	2100.5	2044.5	1995.0
22.5°	2199.3	2147.6	2017.4	1941.2	1907.6
25°	2141.0	2069.1	1921.0	1829.1	1795.3
27.5°	2071.5	1995.0	1831.2	1725.7	1674.1
30°	1997.4	1911.9	1732.4	1618.1	1557.4
32.5°	1925.5	1822.2	1638.4	1503.6	1447.4
35°	1844.8	1730.3	1532.9	1391.4	1341.9
37.5°	1766.2	1642.6	1434.1	1279.1	1223.1
40°	1683.1	1548.6	1330.7	1171.4	1113.1
42.5°	1597.9	1454.3	1227.6	1061.4	1005.5
45°	1508.1	1357.6	1122.2	962.6	908.8
47.5°	1422.9	1263.6	1021.2	861.7	812.4
50°	1328.6	1169.3	922.4	767.4	720.5
52.5°	1236.4	1068.1	828.1	680.0	637.4
55°	1146.7	971.7	729.3	594.8	552.1
57.5°	1054.8	875.2	641.9	516.2	480.2
60°	960.5	781.0	549.8	435.5	399.5
62.5°	868.6	689.1	471.2	363.6	345.7
65°	774.3	592.4	390.5	314.3	307.4
67.5°	684.5	502.6	314.3	276.0	269.3
70°	590.2	415.2	260.2	237.9	228.8
72.5°	500.5	334.3	217.6	199.8	195.2
75°	412.9	255.7	179.5	163.8	161.7
77.5°	325.5	181.7	141.4	132.4	127.9
80°	244.5	130.2	107.6	98.8	98.8
82.5°	170.5	87.6	74.0	69.5	69.5
85°	96.4	49.3	42.6	42.6	42.6
87.5°	36.0	17.9	17.9	15.7	15.7
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930294

CATALOG NUMBER: DFN2DS-HX4F0-060DS835-RLL

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	13.36	14.88	13.73	15.20	15.51	9.32	10.84	9.69	11.16	11.47
	3H	15.13	16.49	15.50	16.82	17.18	10.59	11.95	10.96	12.28	12.64
	4H	15.79	17.07	16.19	17.42	17.80	11.09	12.37	11.49	12.72	13.10
	6H	16.28	17.46	16.69	17.83	18.22	11.47	12.65	11.88	13.02	13.41
	8H	16.45	17.57	16.87	17.96	18.36	11.59	12.72	12.02	13.11	13.51
	12H	16.55	17.63	16.98	18.01	18.44	11.67	12.75	12.11	13.13	13.56
4H	2H	13.46	14.74	13.86	15.09	15.47	10.02	11.30	10.42	11.65	12.02
	3H	15.40	16.46	15.81	16.86	17.26	11.46	12.52	11.87	12.92	13.32
	4H	16.15	17.10	16.58	17.52	17.96	12.06	13.02	12.49	13.43	13.87
	6H	16.74	17.57	17.20	18.01	18.47	12.55	13.38	13.00	13.82	14.28
	8H	16.95	17.73	17.42	18.17	18.64	12.71	13.49	13.17	13.93	14.40
	12H	17.11	17.80	17.59	18.28	18.75	12.83	13.52	13.31	14.00	14.47
8H	4H	16.17	16.95	16.63	17.39	17.86	12.41	13.19	12.88	13.63	14.10
	6H	16.81	17.45	17.31	17.94	18.42	13.00	13.64	13.50	14.13	14.61
	8H	17.06	17.64	17.57	18.15	18.63	13.22	13.80	13.73	14.31	14.80
	12H	17.26	17.77	17.77	18.27	18.83	13.40	13.91	13.91	14.40	14.97
12H	4H	16.16	16.85	16.64	17.33	17.80	12.46	13.15	12.94	13.63	14.10
	6H	16.79	17.37	17.30	17.88	18.36	13.06	13.64	13.58	14.15	14.64
	8H	17.07	17.58	17.58	18.08	18.64	13.34	13.85	13.85	14.34	14.90