

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: P930224

Luminaire Tested: DFN2DS-HX3F0-080DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930224
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-HX3F0-080DS840-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

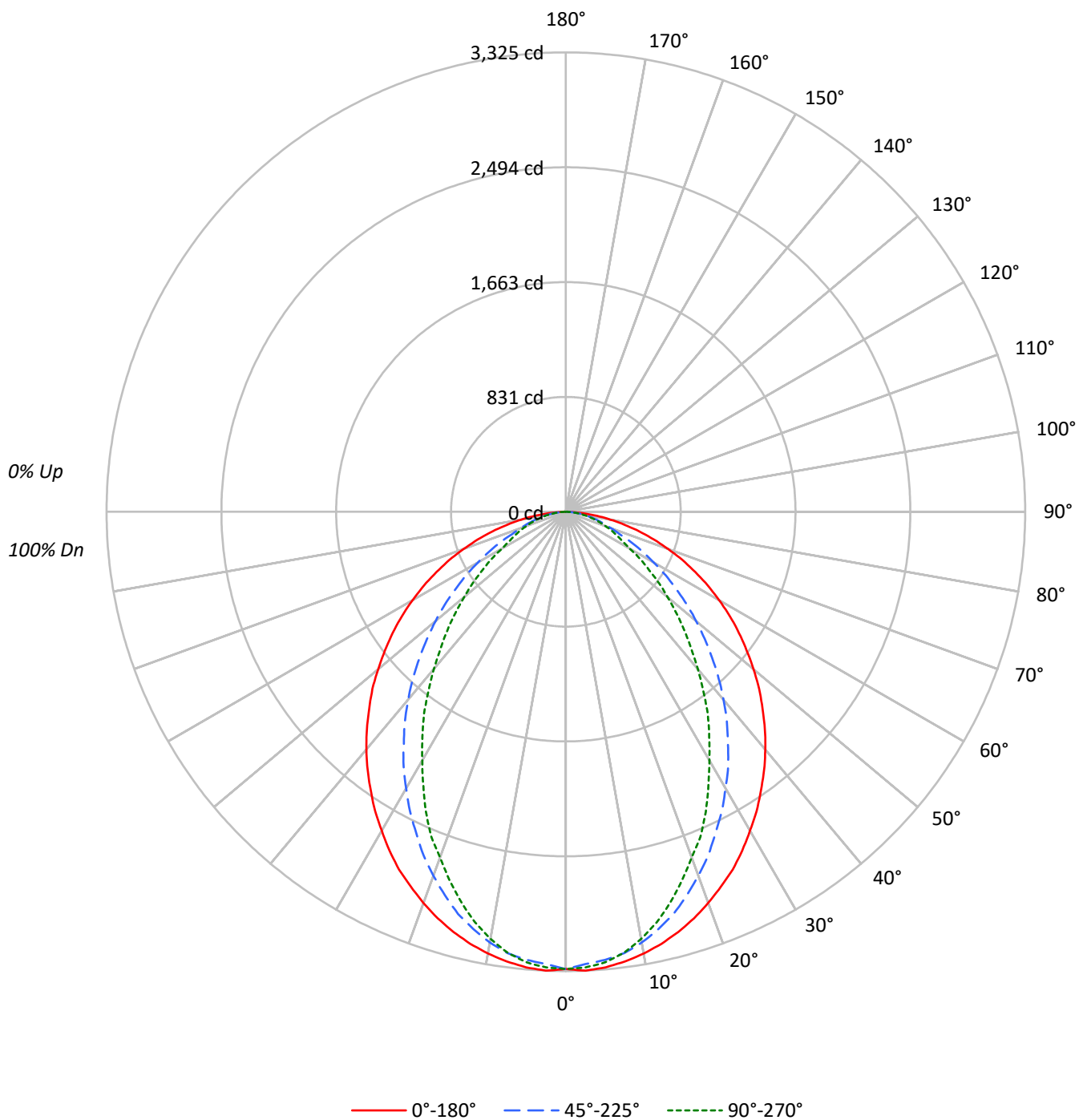
Lumens per Lamp: N/A
Luminaire Lumens: 6806.8 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 84.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930224

CATALOG NUMBER: DFN2DS-HX3F0-080DS840-RLL

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	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°	3834	3834	3834
5°	3848	3786	3807
10°	3819	3724	3692
15°	3775	3613	3509
20°	3714	3456	3282
25°	3652	3277	3062
30°	3566	3093	2780
35°	3482	2893	2533
40°	3397	2686	2246
45°	3297	2453	1987
50°	3195	2219	1733
55°	3091	1966	1488
60°	2970	1700	1235
65°	2832	1428	1124
70°	2668	1176	1034
75°	2466	1072	966
80°	2177	958	879
85°	1710	756	756

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3297 cd/sqm

TEST NUMBER: P930224

CATALOG NUMBER: DFN2DS-HX3F0-080DS840-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.2	4.6
10°-20°	851.5	12.5
20°-30°	1195.5	17.6
30°-40°	1303.2	19.1
40°-50°	1197.8	17.6
50°-60°	940.7	13.8
60°-70°	612.3	9.0
70°-80°	315.2	4.6
80°-90°	80.5	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°	2357.2	34.6
0°-40°	3660.4	53.8
0°-60°	5798.9	85.2
0°-90°	6806.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6806.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3310	3310	3310	3310	3310	
5°	3310	3295	3256	3283	3274	314
15°	3148	3115	3013	2956	2926	887
25°	2858	2762	2564	2441	2396	1314
35°	2462	2309	2046	1857	1791	1541
45°	2013	1812	1498	1285	1213	1554
55°	1530	1297	973	794	737	1368
65°	1033	791	521	420	410	1025
75°	551	341	240	219	216	583
85°	129	66	57	57	57	154
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-HX3F0-080DS840-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3309.7	3309.7	3309.7	3309.7	3309.7
2.5°	3324.6	3309.7	3276.7	3306.8	3300.8
5°	3309.7	3294.8	3255.7	3282.7	3273.8
7.5°	3282.7	3264.9	3222.9	3234.7	3219.7
10°	3246.7	3225.8	3166.1	3156.9	3139.0
12.5°	3202.0	3175.0	3093.9	3076.1	3043.0
15°	3147.9	3114.9	3013.2	2956.4	2926.4
17.5°	3085.0	3037.0	2911.2	2845.4	2797.4
20°	3013.2	2953.2	2803.5	2728.8	2662.7
22.5°	2935.3	2866.4	2692.6	2590.9	2546.0
25°	2857.5	2761.6	2563.9	2441.2	2396.1
27.5°	2764.7	2662.7	2444.0	2303.3	2234.3
30°	2665.9	2551.7	2312.2	2159.7	2078.6
32.5°	2569.9	2432.0	2186.7	2006.8	1931.8
35°	2462.2	2309.3	2045.8	1857.2	1791.0
37.5°	2357.3	2192.4	1914.0	1707.1	1632.4
40°	2246.4	2066.9	1776.1	1563.5	1485.6
42.5°	2132.6	1941.0	1638.4	1416.7	1341.9
45°	2012.8	1812.0	1497.7	1284.8	1213.0
47.5°	1899.1	1686.5	1363.0	1150.0	1084.3
50°	1773.2	1560.7	1231.1	1024.2	961.6
52.5°	1650.2	1425.5	1105.2	907.6	850.7
55°	1530.4	1296.9	973.4	793.8	736.9
57.5°	1407.8	1168.2	856.8	689.0	640.9
60°	1281.9	1042.3	733.7	581.2	533.2
62.5°	1159.3	919.6	628.9	485.3	461.5
65°	1033.4	790.6	521.1	419.5	410.2
67.5°	913.6	670.9	419.5	368.3	359.5
70°	787.8	554.3	347.3	317.4	305.4
72.5°	668.0	446.1	290.5	266.7	260.6
75°	551.1	341.3	239.6	218.6	215.8
77.5°	434.4	242.4	188.8	176.7	170.7
80°	326.3	173.9	143.6	131.8	131.8
82.5°	227.5	116.9	98.8	92.8	92.8
85°	128.7	65.8	56.9	56.9	56.9
87.5°	47.9	23.8	23.8	21.0	21.0
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	15.90	17.43	16.27	17.74	18.05	11.86	13.39	12.23	13.70	14.01
	3H	17.67	19.03	18.05	19.36	19.72	13.13	14.50	13.51	14.82	15.18
	4H	18.34	19.62	18.74	19.96	20.34	13.63	14.91	14.03	15.26	15.64
	6H	18.82	20.01	19.24	20.37	20.77	14.01	15.20	14.42	15.56	15.95
	8H	18.99	20.12	19.42	20.51	20.91	14.14	15.26	14.56	15.65	16.05
	12H	19.09	20.17	19.52	20.55	20.98	14.22	15.30	14.65	15.68	16.11
4H	2H	16.01	17.29	16.41	17.64	18.02	12.56	13.84	12.96	14.19	14.57
	3H	17.94	19.00	18.35	19.40	19.81	14.00	15.07	14.41	15.47	15.87
	4H	18.69	19.65	19.12	20.06	20.50	14.60	15.56	15.03	15.97	16.41
	6H	19.28	20.11	19.74	20.56	21.02	15.09	15.92	15.55	16.37	16.82
	8H	19.50	20.27	19.96	20.72	21.19	15.25	16.03	15.72	16.47	16.94
	12H	19.65	20.34	20.13	20.82	21.29	15.37	16.06	15.85	16.54	17.01
8H	4H	18.71	19.49	19.18	19.94	20.40	14.96	15.73	15.42	16.18	16.65
	6H	19.35	19.99	19.85	20.49	20.96	15.54	16.19	16.04	16.68	17.15
	8H	19.60	20.18	20.12	20.69	21.18	15.76	16.34	16.28	16.85	17.34
	12H	19.81	20.32	20.32	20.81	21.37	15.94	16.45	16.45	16.94	17.51
12H	4H	18.70	19.39	19.18	19.87	20.34	15.00	15.69	15.48	16.17	16.64
	6H	19.33	19.91	19.85	20.42	20.91	15.61	16.18	16.12	16.69	17.18
	8H	19.62	20.13	20.13	20.62	21.18	15.88	16.39	16.39	16.88	17.45