

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: P930226

Luminaire Tested: DFN2DS-HX3F0-080DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930226
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-HX3F0-080DS850-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

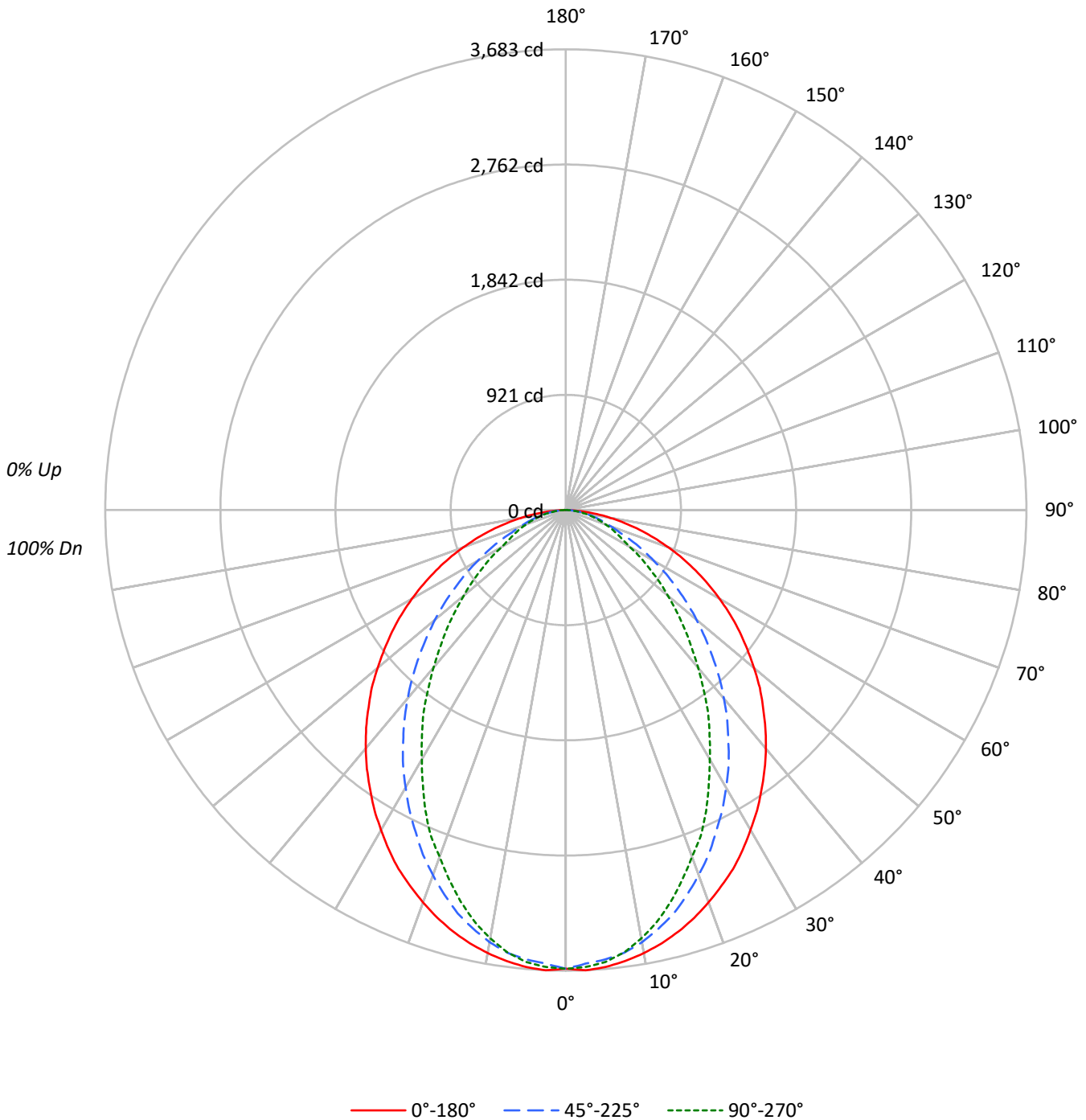
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7541.2 lumens
Efficiency: N/A
Efficacy: 89.4 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

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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		0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	86	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	76	74	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	66	64	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	57	55	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	51	49	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	43	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	41	39	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	37	35	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	34	32	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	31	29	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4247	4247	4247
5°	4264	4194	4217
10°	4231	4126	4091
15°	4182	4003	3888
20°	4115	3829	3636
25°	4046	3630	3393
30°	3950	3426	3080
35°	3857	3205	2806
40°	3763	2975	2489
45°	3653	2718	2202
50°	3540	2458	1920
55°	3424	2178	1649
60°	3290	1883	1369
65°	3138	1582	1246
70°	2956	1303	1146
75°	2732	1188	1070
80°	2411	1061	975
85°	1895	837	837

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3653 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	343.7	4.6
10°-20°	943.4	12.5
20°-30°	1324.5	17.6
30°-40°	1443.8	19.1
40°-50°	1327.0	17.6
50°-60°	1042.1	13.8
60°-70°	678.3	9.0
70°-80°	349.2	4.6
80°-90°	89.1	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°	2611.6	34.6
0°-40°	4055.4	53.8
0°-60°	6424.5	85.2
0°-90°	7541.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7541.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3667	3667	3667	3667	3667	
5°	3667	3650	3607	3637	3627	348
15°	3488	3451	3338	3275	3242	983
25°	3166	3060	2840	2705	2655	1456
35°	2728	2558	2267	2058	1984	1707
45°	2230	2008	1659	1423	1344	1722
55°	1696	1437	1078	879	816	1515
65°	1145	876	577	465	454	1135
75°	610	378	266	242	239	646
85°	143	73	63	63	63	171
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3666.8	3666.8	3666.8	3666.8	3666.8
2.5°	3683.3	3666.8	3630.2	3663.6	3656.9
5°	3666.8	3650.3	3606.9	3636.9	3627.0
7.5°	3636.9	3617.1	3570.6	3583.7	3567.1
10°	3597.0	3573.9	3507.7	3497.5	3477.7
12.5°	3547.5	3517.5	3427.7	3408.0	3371.4
15°	3487.6	3451.0	3338.3	3275.3	3242.2
17.5°	3417.8	3364.7	3225.3	3152.4	3099.2
20°	3338.3	3271.8	3106.0	3023.2	2949.9
22.5°	3252.0	3175.6	2983.1	2870.4	2820.7
25°	3165.8	3059.5	2840.5	2704.6	2654.6
27.5°	3062.9	2949.9	2707.7	2551.8	2475.4
30°	2953.5	2827.1	2561.7	2392.7	2302.8
32.5°	2847.1	2694.4	2422.6	2223.3	2140.3
35°	2727.8	2558.5	2266.6	2057.5	1984.2
37.5°	2611.6	2428.9	2120.5	1891.3	1808.6
40°	2488.8	2289.9	1967.7	1732.1	1645.9
42.5°	2362.7	2150.5	1815.2	1569.6	1486.7
45°	2230.0	2007.5	1659.3	1423.4	1343.9
47.5°	2104.0	1868.4	1510.0	1274.1	1201.3
50°	1964.5	1729.0	1364.0	1134.7	1065.3
52.5°	1828.3	1579.3	1224.4	1005.5	942.5
55°	1695.6	1436.8	1078.4	879.4	816.4
57.5°	1559.7	1294.2	949.2	763.3	710.1
60°	1420.2	1154.8	812.9	643.9	590.8
62.5°	1284.3	1018.8	696.8	537.6	511.2
65°	1144.9	875.9	577.3	464.8	454.5
67.5°	1012.2	743.3	464.8	408.0	398.2
70°	872.8	614.1	384.8	351.7	338.4
72.5°	740.0	494.3	321.8	295.4	288.7
75°	610.5	378.2	265.5	242.2	239.1
77.5°	481.3	268.6	209.2	195.7	189.1
80°	361.5	192.6	159.1	146.1	146.1
82.5°	252.1	129.5	109.5	102.8	102.8
85°	142.6	72.9	63.0	63.0	63.0
87.5°	53.1	26.4	26.4	23.3	23.3
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	16.26	17.78	16.62	18.09	18.41	12.22	13.74	12.59	14.06	14.37
	3H	18.03	19.39	18.40	19.72	20.08	13.49	14.85	13.86	15.18	15.54
	4H	18.69	19.97	19.09	20.32	20.70	13.99	15.27	14.39	15.62	16.00
	6H	19.18	20.36	19.59	20.73	21.12	14.37	15.55	14.78	15.92	16.31
	8H	19.35	20.47	19.77	20.86	21.26	14.49	15.62	14.92	16.01	16.41
	12H	19.45	20.53	19.88	20.91	21.34	14.57	15.65	15.00	16.03	16.46
4H	2H	16.36	17.64	16.76	17.99	18.37	12.92	14.20	13.32	14.55	14.92
	3H	18.30	19.36	18.71	19.76	20.16	14.36	15.42	14.77	15.82	16.22
	4H	19.05	20.00	19.48	20.42	20.86	14.96	15.91	15.39	16.33	16.77
	6H	19.64	20.47	20.10	20.91	21.37	15.45	16.28	15.90	16.72	17.18
	8H	19.85	20.63	20.32	21.07	21.54	15.61	16.39	16.07	16.83	17.30
	12H	20.01	20.70	20.49	21.18	21.65	15.73	16.42	16.21	16.90	17.37
8H	4H	19.07	19.85	19.53	20.29	20.76	15.31	16.09	15.78	16.53	17.00
	6H	19.71	20.35	20.20	20.84	21.32	15.90	16.54	16.40	17.03	17.51
	8H	19.96	20.54	20.47	21.04	21.53	16.12	16.70	16.63	17.21	17.69
	12H	20.16	20.67	20.67	21.16	21.73	16.30	16.81	16.81	17.30	17.87
12H	4H	19.06	19.75	19.54	20.23	20.70	15.36	16.05	15.84	16.53	17.00
	6H	19.69	20.27	20.20	20.78	21.26	15.96	16.54	16.48	17.05	17.54
	8H	19.97	20.48	20.48	20.98	21.54	16.24	16.75	16.74	17.24	17.80