

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: P930144

Luminaire Tested: DFN2DS-HX3F0-030DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930144
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-HX3F0-030DS940-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

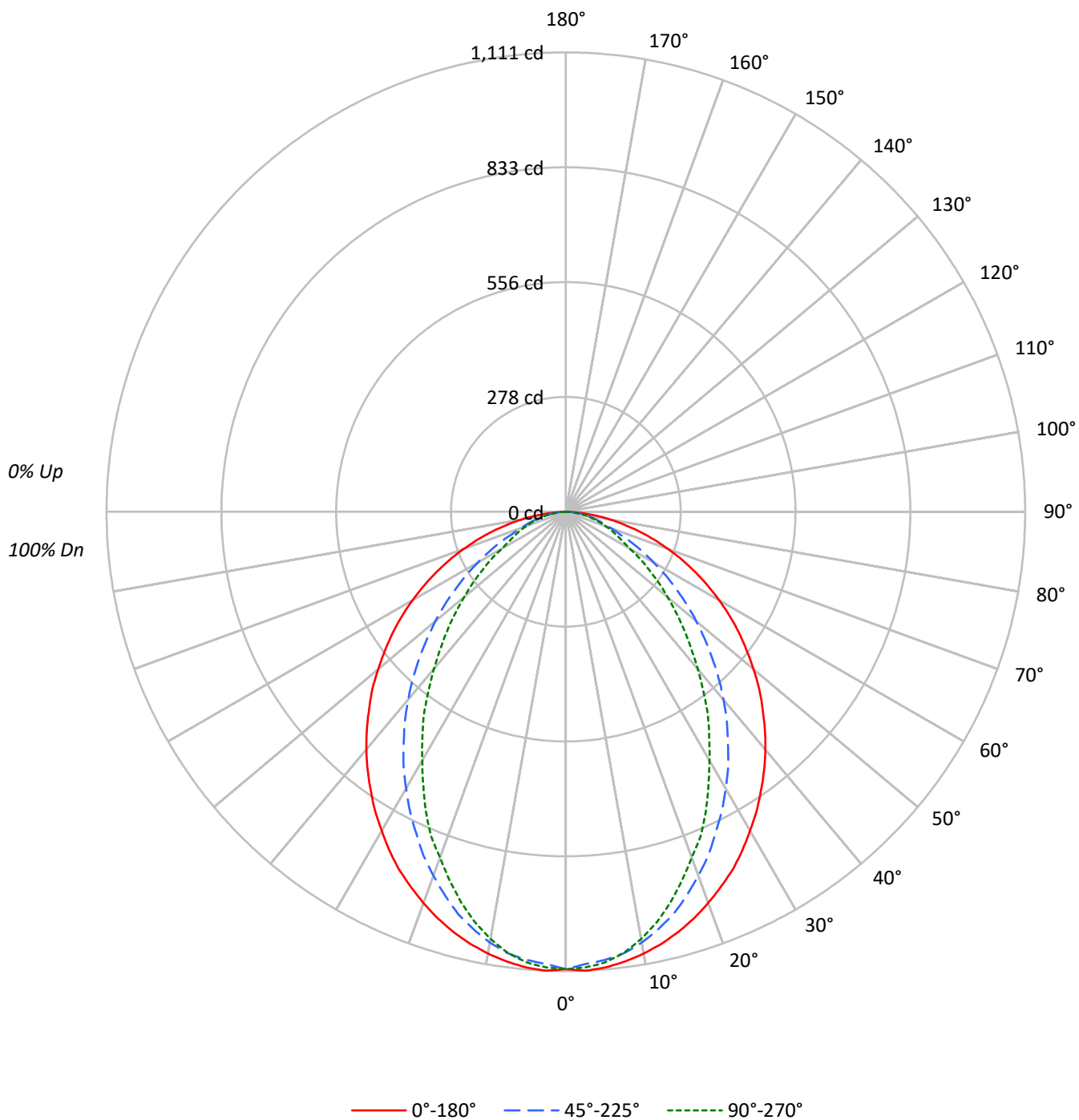
Lumens per Lamp: N/A
Luminaire Lumens: 2274.6 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 28.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.983
Total Harmonic Distortion (THDi): 0.073
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	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°	1281	1281	1281
5°	1286	1265	1272
10°	1276	1244	1234
15°	1261	1207	1173
20°	1241	1155	1097
25°	1220	1095	1023
30°	1191	1034	929
35°	1164	967	846
40°	1135	897	751
45°	1102	820	664
50°	1068	741	579
55°	1033	657	497
60°	992	568	413
65°	946	477	376
70°	891	393	345
75°	824	358	323
80°	728	320	294
85°	571	253	253

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1102 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.7	4.6
10°-20°	284.6	12.5
20°-30°	399.5	17.6
30°-40°	435.5	19.1
40°-50°	400.3	17.6
50°-60°	314.3	13.8
60°-70°	204.6	9.0
70°-80°	105.3	4.6
80°-90°	26.9	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°	787.7	34.6
0°-40°	1223.2	53.8
0°-60°	1937.8	85.2
0°-90°	2274.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2274.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1106	1106	1106	1106	1106	
5°	1106	1101	1088	1097	1094	105
15°	1052	1041	1007	988	978	296
25°	955	923	857	816	801	439
35°	823	772	684	621	598	515
45°	673	606	500	429	405	519
55°	511	433	325	265	246	457
65°	345	264	174	140	137	342
75°	184	114	80	73	72	195
85°	43	22	19	19	19	52
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1106.0	1106.0	1106.0	1106.0	1106.0
2.5°	1111.0	1106.0	1094.9	1105.0	1103.0
5°	1106.0	1101.0	1088.0	1097.0	1093.9
7.5°	1097.0	1091.0	1077.0	1080.9	1075.9
10°	1084.9	1078.0	1058.0	1054.9	1049.0
12.5°	1070.0	1060.9	1033.9	1027.9	1016.9
15°	1051.9	1040.9	1006.9	987.9	977.9
17.5°	1030.9	1014.9	972.8	950.9	934.8
20°	1006.9	986.8	936.8	911.9	889.8
22.5°	980.9	957.8	899.8	865.8	850.8
25°	954.9	922.8	856.8	815.7	800.7
27.5°	923.8	889.8	816.7	769.7	746.6
30°	890.8	852.8	772.7	721.7	694.6
32.5°	858.7	812.7	730.7	670.6	645.5
35°	822.8	771.7	683.6	620.6	598.5
37.5°	787.7	732.6	639.6	570.4	545.5
40°	750.7	690.7	593.5	522.4	496.5
42.5°	712.6	648.7	547.5	473.4	448.4
45°	672.7	605.5	500.5	429.3	405.3
47.5°	634.6	563.6	455.5	384.3	362.3
50°	592.6	521.5	411.4	342.3	321.3
52.5°	551.4	476.4	369.4	303.3	284.3
55°	511.4	433.3	325.2	265.3	246.3
57.5°	470.4	390.3	286.3	230.2	214.2
60°	428.3	348.3	245.2	194.2	178.2
62.5°	387.4	307.3	210.2	162.2	154.2
65°	345.3	264.2	174.1	140.1	137.1
67.5°	305.3	224.2	140.1	123.1	120.1
70°	263.2	185.2	116.0	106.1	102.0
72.5°	223.2	149.1	97.0	89.1	87.1
75°	184.1	114.1	80.1	73.1	72.1
77.5°	145.1	81.0	63.1	59.1	57.0
80°	109.1	58.1	48.0	44.1	44.1
82.5°	76.0	39.1	33.0	31.0	31.0
85°	43.0	21.9	19.0	19.0	19.0
87.5°	16.1	7.9	7.9	7.0	7.0
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	12.09	13.62	12.46	13.93	14.24	8.06	9.58	8.42	9.89	10.21
	3H	13.86	15.23	14.24	15.55	15.92	9.32	10.69	9.70	11.01	11.38
	4H	14.53	15.81	14.93	16.16	16.53	9.82	11.10	10.22	11.45	11.83
	6H	15.02	16.20	15.43	16.56	16.96	10.20	11.39	10.62	11.75	12.15
	8H	15.18	16.31	15.61	16.70	17.10	10.33	11.46	10.75	11.84	12.25
	12H	15.28	16.36	15.71	16.74	17.17	10.41	11.49	10.84	11.87	12.30
4H	2H	12.20	13.48	12.60	13.83	14.21	8.75	10.03	9.15	10.38	10.76
	3H	14.13	15.19	14.54	15.59	16.00	10.19	11.26	10.60	11.66	12.06
	4H	14.88	15.84	15.31	16.25	16.69	10.79	11.75	11.23	12.17	12.60
	6H	15.47	16.31	15.93	16.75	17.21	11.28	12.11	11.74	12.56	13.02
	8H	15.69	16.47	16.15	16.91	17.38	11.44	12.22	11.91	12.67	13.13
	12H	15.84	16.54	16.32	17.01	17.49	11.56	12.26	12.04	12.73	13.21
8H	4H	14.91	15.68	15.37	16.13	16.59	11.15	11.93	11.61	12.37	12.84
	6H	15.54	16.19	16.04	16.68	17.15	11.74	12.38	12.23	12.87	13.35
	8H	15.79	16.37	16.31	16.88	17.37	11.96	12.53	12.47	13.04	13.53
	12H	16.00	16.51	16.51	17.00	17.56	12.14	12.64	12.64	13.14	13.70
12H	4H	14.89	15.59	15.37	16.06	16.53	11.19	11.89	11.67	12.36	12.84
	6H	15.52	16.10	16.04	16.61	17.10	11.80	12.38	12.31	12.89	13.37
	8H	15.81	16.32	16.32	16.81	17.38	12.07	12.58	12.58	13.07	13.64

END OF REPORT